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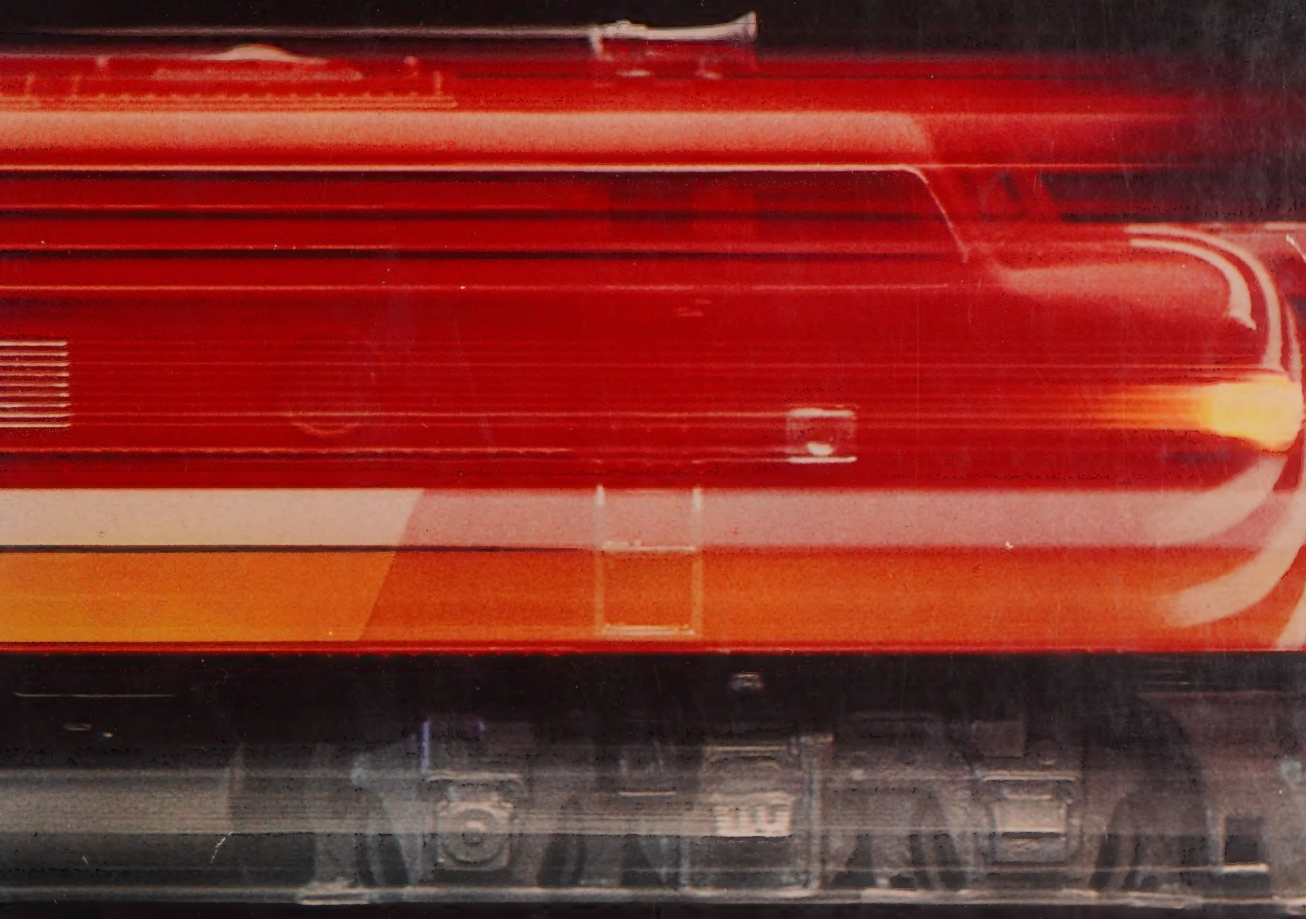
ONTARIO TASK FORCE

ON PROVINCIAL RAIL POLICY

# THE FUTURE ROLE OF RAIL

## A POLICY POSITION

INTERIM REPORT—OCTOBER, 1980



MARGARET SCRIVENER, M.P.P.  
CHAIRMAN



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## THE FUTURE ROLE OF RAIL

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ONTARIO TASK FORCE ON PROVINCIAL RAIL POLICY

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**ONTARIO TASK FORCE**

**ON PROVINCIAL RAIL POLICY**

# **THE FUTURE ROLE OF RAIL**

**A POLICY POSITION**

**INTERIM REPORT—OCTOBER, 1980**



Ontario

**MARGARET SCRIVENER, M.P.P.  
CHAIRMAN**

*The Interim Report of the  
Ontario Task Force on  
Provincial Rail Policy is  
contained in five volumes:*

*PUBLIC SUBMISSIONS*

*WORKING PAPERS,  
Volume I  
Volume II  
Volume III*

*THE FUTURE ROLE OF RAIL,  
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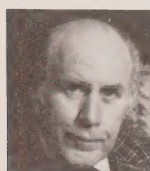
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## FOREWORD

In order to evaluate today's transportation facilities in the context of tomorrow's needs, Premier William Davis appointed the Ontario Task Force on Provincial Rail Policy to review, research and report on the role of the railways within our Province.

Many interested individuals and groups, including senior transportation executives, government representatives, professionals, specialists and private citizens expressed their opinions. The views we received were as diverse as their origins, but each was invaluable to the Task Force in the preparation of this, the first comprehensive study of the rail transportation system undertaken by a Provincial body.

The comments and viewpoints expressed in this Interim Report are offered as guidelines for continuing examination and discussion to all those who have a concern for the future role of rail in Ontario.

We invite your comment.

A handwritten signature in cursive script that reads "Margaret Scrivener". The ink is dark and the signature is fluid.

Margaret Scrivener (Mrs.),  
CHAIRMAN.





## THE REASONS WHY



*The time has come to develop a rail transportation policy that gives the people of Ontario the best value for their money.*

Why should a provincial task force be studying railway policy? Aren't railways under federal jurisdiction? Surely various royal commissions have already analysed railways inside out; what has happened to justify another study at this particular point in time?

These are some of the questions which have been raised concerning the creation and the objectives of the Ontario Task Force on Provincial Railway Policy. It therefore seems fitting to set out, by way of introduction to this Interim Report, the reasons why Ontario has a vital stake in railways, in the services they provide and in the effect of their operations on the provincial economy and social environment.

### **Railways are an essential component of Ontario's transportation system**

An efficient transportation system is vital to the well being of any country or geographic region. But vast

distances, low population density and a severe climate make the economy of Canada in general and of Ontario in particular more dependent on the quality and reliability of its transportation system than most industrialized countries.

Ontario has almost 10,000 miles of railway track, more than any other Canadian province. Along with roads, airports and waterways, railways are an intrinsic part of the transportation network which moves the province's products to market and provides individuals as well as business and industry with their requirements. That system can only be as good as its parts; any weak link is bound to have a serious effect on the economy, particularly in those areas where no alternative means of transportation is available. For instance: Ontario depends on railways to transport the products of a mining industry which accounts for 25 percent of the province's exports. Any failure of the railways to operate efficiently, or

any attempt to increase their profits at the expense of the resource industries' ability to compete on world markets, would be a matter of profound concern to the Government of Ontario.

### **Railways link northern Ontario with the outside world**

Because of its size and differences in lifestyle, Ontario is in many ways a microcosm of Canada. Toronto is closer to Miami than to Hudson Bay, and motorists speeding along multilane highways in the Golden Horseshoe area may think of railways as an antiquated, inconvenient means of travel. Nevertheless, many Ontario citizens in the northern part of the province are totally dependent on railways for access to medical services, for educational opportunities, for shopping and for social contact outside their own communities.

Though the benefit of the service provided by the railways to such communities may not be measurable in dollars and cents, it is invaluable in human terms. From the Province's point of view, it is imperative that the service be maintained and, possibly, improved.

### **Railways are already part of Ontario's responsibilities**

Contrary to widespread assumptions, Ontario has been in the railway business for a long time. Some of Canada's earliest railways were built with Ontario taxpayers' money. Even today, the Province operates the Ontario Northland Railway, launched in 1903 and completed by successive provincial governments. The railway has been described as the single most important contribution to the opening of the north; its services are an essential part of people's lives and of the economy of that part of the province.

The same can be said about the commuter services in and around Metropolitan Toronto which the railways operate under contract to the Provincial Government. Since it went into operation in the late 1960's, GO Transit has evolved into an intrinsic part of the metropolitan transportation system with major implications for the development of southern Ontario.

### **Railways are a major source of employment**

Of the railways' 120,900 employees, approximately 25,000 live in Ontario. Ontario is also the home of industries which manufacture more than half the railway equipment produced in Canada, with an estimated total price tag of well over one billion dollars annually. Additional jobs are created by the rebuilding of equipment, roadbed maintenance and the railways' engineering requirements. The railway industry is therefore a sizable factor in the

province's overall employment picture.

### **Railways affect the environment**

While most municipalities cry foul at the mere suggestion of the loss of rail service, their enthusiasm for railways is tempered by concerns about the effect of railways on land use, on municipal plans and on the development of residential neighbourhoods. These are concerns which are clearly within provincial jurisdiction, even though the railways themselves are not. Many of the submissions received by the Task Force indicate an urgent need for some mechanism to bridge this jurisdictional gap and to deal with the more urgent environmental and planning problems.

\* \* \* \* \*

### **Two dominant issues**

The province's economy, contact with northern communities, commuter services, employment, environmental concerns – all these are valid reasons for provincial involvement in railway policy; but none of them are new and, therefore, none may seem particularly urgent. However, two recent developments have brought the railway issue to the fore and made new approaches imperative. One is the price and availability of fossil fuels; the other is safety. They are the basis for the following two urgent reasons why Canada needs a railway policy, and why Ontario should be involved in formulating it.

### **Railways are potentially one of the most fuel efficient means of transport**

This is true of both freight and passenger services. Only waterways can compete with freight trains when it comes to energy consumption, but waterways are not always available where they are needed. As for passenger travel, buses are more energy efficient than existing trains, though that situation could be reversed if Canada were to acquire some of the modern trains already in use in many industrialized countries. However, the vast majority of Canadians do not travel by either train or bus; for short and medium distances where buses and trains are competitive in terms of time, most travellers opt for the most energy intensive mode there is, namely the private motorcar. Similarly, much of the province's freight moves by truck even though rail is up to four times more fuel efficient.

What would happen if the supply of gasoline and diesel fuel were to be suddenly curtailed – a contingency which, given the political climate in



many oil-rich countries, is far from fanciful? What would happen if prices were to go so high as to propel the cost of highway and air transport beyond the means of their current users? Even if no major crisis were to arise, should Ontario continue to rely so heavily on a dwindling resource which it does not own and over which it has no control? As Premier Davis said when announcing the formation of the Task Force on Provincial Rail Policy, one of the major issues is "the potential need to develop alternative energy sources with the knowledge that abundant electrical energy exists for transportation services in Ontario."

**Railways are a potential hazard to the health and safety of Ontario citizens**

The Mississauga derailment which necessitated the evacuation of 250,000 people proved what some critics had been saying for years: there is a need for the formulation and enforcement of safety standards with regard to the transport of dangerous materials. In the past, occasional level crossing accidents and train collisions could be dismissed as minor mishaps compared to the carnage on the province's highways. But a derailment which releases lethal gases in one of Ontario's major cities has awakened the public and the government to a kind of danger which has been largely ignored in the past. Since the safety and health of its citizens is clearly a provincial responsibility, the Government of Ontario has a vital stake in this aspect of railway policy.

Jurisdictional hurdles notwithstanding, the time has come for governments at all levels to face railway-related issues, to look beyond today or tomorrow and to develop a rail transportation policy that gives the people of Ontario and of Canada the best value for their money. In view of Ontario's extensive involvement in railways, its vital interest in an efficient transportation system and the rapidly changing circumstances affecting that system, it seems logical that a study of the railways' role should have originated at the provincial level. In presenting its findings, the Task Force hopes that they will lend impetus to the kind of intergovernmental initiatives for which the situation clearly calls.



# HISTORY OF CANADA'S RAILWAYS:

## A BUSINESS OR A SERVICE?



*Railways have played an integral part in the history of Ontario's development.*

If there is one consistent theme which is interwoven with the early history of Canadian railways, it is the determination of both federal and provincial governments to cast them in the role of public service agencies. Since railways facilitated inland settlements, provided what was often the only means of transport for people or goods and, eventually, helped link a string of colonies into one country, it seemed perfectly logical to the legislators that the public purse should be wide open for the railways' benefit.

In Ontario, the pattern was set 18 years before Confederation when the first legislature of the recently united Province of Canada launched the country's railway boom by passing the Railway Guarantee Act. Up until 1849, lack of investment capital had virtually precluded any railway construction in British North America. The Act overcame the difficulty by authorizing the provincial government to guarantee the interest, up to six percent per annum, on half the bonds of any railway over 75 miles long, provided half the road had been constructed.

The result of the legislation was explosive. Within ten years, the Province acquired more than 1,200

miles of railway track, most of it owned by two major companies: the Grand Trunk whose line extended from Portland, Maine, through Montreal, Toronto and Sarnia to Detroit; and the Great Western, which ran from Niagara Falls through Hamilton to London and Windsor. A number of smaller lines supplemented the large ones in what was to become southern Ontario.

From a business point of view, however, the railway boom looked considerably less impressive. In spite of millions of dollars raised with the help of government guarantees, the two major companies were in almost constant financial trouble; their debts assumed increasingly alarming proportions to the extent where, in 1859, the Great Western defaulted on interest payments to the government.

If the railways nevertheless managed to survive, it was largely because they had powerful friends in high places. Francis Hincks, Premier of the Province from 1851 to 1854, was the number one promoter of the Grand Trunk: and when a scandal over his business transactions forced him to resign, he was succeeded by Sir Allan MacNab, President and Chairman of the Board of the Great Western Railway Company. As MacNab said in a moment of



praiseworthy candor, "railways are my politics."

But neither scandals nor deficits dimmed the public's perception of railways as the embodiment of progress. For farmers who could take their grain to a nearby station instead of hauling it along muddy roads to a distant port, for merchants who found the travel time between Toronto and Montreal reduced from five days to 18 hours, railways meant the advent of a brave new world.

That world assumed even more dramatic dimensions when, after a lull of some ten years, the railway boom resumed and culminated in the construction of the Canadian Pacific line to the west coast. True, there were pre-Confederation sceptics in the Canadian Legislature who claimed that Confederation was the brain child of railway barons who needed an excuse for building a transcontinental line. But theirs was a voice in the wilderness. In the eyes of the federal as well as provincial governments, railways were vital for the development of the country and no price was too high to pay for their services.

Even while Ottawa was heaping millions of dollars, plus land grants and lifelong tax exemptions on the Canadian Pacific, the Ontario Loan Fund was established to stimulate construction of branch lines and new lines into unsettled parts of the province. The fund, worth one and a half million dollars, was designed to pay out bonuses of two to three thousand dollars for every mile of railway constructed. To make absolutely sure that the railways would not change their minds, Ontario in 1878 introduced the Railway Aid Act to assist companies which had run into financial difficulties complete the construction of their rail lines.

The net result of this legislation was a cobweb of branch lines throughout southern Ontario, and a commensurate shrinkage of the province's Consolidated Revenue Fund. By 1884 when a business recession brought railway construction in Canada to a temporary standstill, no settled part of Ontario was more than 19 miles from a railway station.

The tradition of government support for the railways carried over into the twentieth century when the Laurier government, not to be outdone by its Conservative predecessor, agreed to provide help for two additional transcontinental railways, the Canadian Northern and the Grand Trunk Pacific. Since the latter was to run only from Winnipeg to the west coast, the federal government undertook to construct a connecting line through Ontario and Quebec under the name of National Transcontinental Railway. Neither the Canadian Northern nor the National

Transcontinental were completed in 1914 when World War I broke out.

Meanwhile, construction of the Canadian Pacific line around Lake Superior had opened up a base for railway development in northern Ontario. In 1902, the Temiskaming and Northern Ontario Railway was incorporated by an Act of the Provincial Legislature; construction began on the T&NO line from North Bay to Cochrane. About the same time, the Algoma Central and Hudson Bay Railway was conceived in the hope of linking Algoma Steel's production facilities at Sault Ste. Marie with a salt water terminal on Hudson Bay. When that scheme proved overly ambitious, the company decided to terminate the line at Hearst where it would connect with the National Transcontinental Railway.

### The Genesis of Canadian National

What should have been apparent all along became painfully obvious during World War I: there was not nearly enough traffic to support three transcontinental railways plus a branch line network founded on unrealistic expectations of future business. For one stretch in southern Ontario, three trunk lines provided parallel services within a few miles of each other, and some 400 private railway companies contributed toward the 7,000 miles of track within the province. The Grand Trunk had already absorbed the chronically ailing Great Western before the turn of the century, but the war brought most of the country's railways to the brink of bankruptcy. Only Canadian Pacific survived as a viable enterprise.

Once again, government had to come to the rescue. In accordance with the recommendations of the first of several royal commissions appointed to inquire into Canada's railways, the federal government acquired the Grand Trunk Pacific, its parent Grand Trunk and the Canadian Northern, along with a number of smaller lines, and proceeded to weld them with the National Transcontinental into the publicly owned Canadian National Railways.

The royal commission had also recommended that the newly formed railway system should be run as a commercial, profit oriented concern; but as it turned out, that recommendation ignored the geographic and political realities of a country such as Canada. Though the vast majority of the freight and passengers carried by the CNR was concentrated within a small percentage of its network, there could be no question of the government owned railway abandoning its unprofitable lines.

While the provincial governments had, to all intents and purposes, withdrawn from the railway subsidiza-

tion arena, the federal government continued during the 1920's to pour money into the Canadian National in an effort not only to make it more efficient, but also to turn it into an instrument of trade and regional development. The profit motive was all but forgotten, particularly during the depression years when even the earnings of Canadian Pacific failed to cover fixed charges. As for Canadian National, its deficit grew to the point where it rivaled in magnitude the sum total of federal income taxes.

Nevertheless, the basic dilemma continued to haunt the railways: were they in business to sell transportation the same way the breakfast cereal industry sells corn flakes, or were they supposed to serve the public, regardless of cost? The problem grew increasingly acute as the country in general and Ontario in particular embarked on an ambitious road building program for the benefit of motorists, buses and trucking companies. Faced with growing competition and a dramatic decline in patronage, the railways found themselves hemmed in by regulations geared to the public interest rather than profitability.

Another royal commission tried to grapple with the problem in the early thirties, and ended up by endorsing the status quo. According to the Duff Commission, Canadian Pacific was to dispense transportation from the standpoint of profit and loss, but the same commercial standards were not to be applied to Canadian National. As though to reinforce this judgement, Parliament in 1933 passed a law forbidding arbitrary abandonment of railway lines. Four years later, the government wrote off the debts incurred by the CNR to cover operating deficits and the unpaid interest on those loans.

During World War II, financial problems were temporarily forgotten as railways struggled to keep up with the unprecedented demand for their services. The transport of troops, munitions and civilian as well as military supplies added up to the highest level of rail traffic in Canadian history. Rising operating expenses were easily absorbed by the jump in revenues, and Canadian National had large surpluses even after paying all the interest on its huge inherited debts. Canadian Pacific resumed dividend payments which had been suspended in the 1930's.

But peacetime brought more increases in operating expenses, renewed competition from highway carriers and a sharp decline in revenues. To exacerbate the situation, the railways were obliged under the Crow's Nest Pass Agreement to carry western grain at rates which were pegged at the 1899 level, and which were becoming

increasingly unrealistic. An increase in freight rates authorized in 1948 by the Board of Transport Commissioners proved inadequate, though it aroused bitter complaints from the railways' customers.

The Turgeon Royal Commission in 1951 did nothing to resolve the dilemma. The Commission ruled that freight rates must be fair and reasonable not only to the railroads, but also to shippers and consignees. The railways were to make money if they could, but that was not their only nor even their main mission in life. "Experience has shown," said the Commission report, "that such a factor (return on investment) may not be the guiding factor, it may be one which in times of economic depression must give way to other considerations."

Nevertheless, the railways successfully applied for 14 rate increases in the years 1948-58, resulting in an overall increase of some 155 percent. Finally in 1959, when the railways asked for yet another 12 percent rate increase, the Diefenbaker government responded by passing the Freight Rates Reduction Act which gave the railways a \$20 million subsidy, but ordered them to roll back a number of freight rates and passenger fares. At the same time, the MacPherson Royal Commission was appointed to probe once again railway operations and their role within the country's transportation system.

### **The MacPherson Commission and the National Transportation Act**

The MacPherson report, tabled in 1961, marked a turning point in royal commissioners' transportation philosophy. Unlike his predecessors, MacPherson came out unequivocally in favour of freeing the railways from those obligations which prevented them from competing successfully with other transportation modes. Specifically, the report said, the railways should not have to provide uneconomic passenger services, run unprofitable branch lines or be subject to antiquated regulations concerning the transport of grain. To the extent that the government wanted any of these services to be continued until such time as they could be phased out, the railways should be compensated for their losses.

It took the federal government six years to translate the MacPherson report into legislation and when Parliament finally passed the National Transportation Act in 1967, it was a decidedly diluted version of the thesis advocated by the royal commission. The Act does come out in favour of "an economic, efficient and adequate transportation system making the best use of all available modes of transportation at the lowest total cost," and goes on to say that this objective is most

likely to be achieved by a minimum of regulation and free competition between transportation modes.

But the Act also insists that railway rates must not constitute "an undue obstacle to the interchange of commodities through Canadian ports." It does nothing to rescind the Crow's Nest rates, nor does it discontinue some of the subsidies available to the railways under such earlier pieces of legislation as the Maritime Freight Rates Act.\* In other words, it still casts the railways in the role of both public utility and commercial enterprise, without any guidelines as to the way these two frequently contradictory functions are to be reconciled.

To implement the National Transportation Act, the federal government created the Canadian Transport Commission (CTC), a regulatory agency charged with "coordinating and harmonizing the operations of all carriers engaged in transport by railway, water, aircraft, extra-provincial motor vehicle transport and commodity pipelines." It is the CTC which decides whether an unprofitable service or branch line may be abandoned, or whether it should be continued at the taxpayers' expense.

In spite of some inherent ambiguities in the legislation, the railways hailed the National Transportation Act as a vote in favour of pricing freedom and commercial viability. While the profit orientation of Canadian Pacific had never been in doubt, the Act marked the beginning of a new era for Canadian National. Not only was the company free to negotiate, within statutory limits, advantageous freight rates; it could also gear its marketing strategy in the direction of bulk unit train traffic for which the railways are uniquely well equipped. A corresponding development was a further loss of interest in passenger traffic which the railways perceived as a millstone around their necks.

That newfound profit orientation seemed destined to be shortlived when the federal government in 1977 introduced Bill C-33 "to amend the National Transportation Act." The Bill tried to do much more than amend; by listing "the achievement of national, social and economic objectives" as one of three objectives of Canada's transportation policy, it attempted to redefine the focus of that policy. Unlike the National Transportation Act, it did not even mention competition;

instead it spoke of "integration of services," with the implication that the government would preside over the implementation of that integration.

However, Bill-33 came under heavy attack from many quarters and was withdrawn. Its demise re-affirmed the concept of railways as a business rather than a public service. Freed from all but a few statutory regulations, Canada's two major railways were henceforth to compete with each other like any other members of the corporate community.

From the public's point of view, the most visible manifestation of this policy was the two major railways' exit from the passenger business. VIA Rail Canada was created in 1977 to assume full responsibility for passenger services (see Chapter V), thus relieving CN and CP of massive annual deficits. CN's position was further strengthened in 1978 when the Federal Government converted to equity more than \$800 million of CN's debt – a move which reduced the railway's annual interest payments by some \$65 million.

The bottom line result of all these developments has been spectacular. CN last year reported profits of \$208 million on revenues of \$2.3 billion, and a return on investment of 7.5 per cent. CP Rail's net income amounted to \$93.7 million, up \$30.2 million or 48 per cent over 1978; its rate of return on investment is "currently in the area of nine per cent", according to the railway's submission to the Task Force.

Clearly both CP and CN have come a long way since the years before the National Transportation Act, when their return on investment hovered at a dismal 0.8 per cent. For the time being at least, the question of whether railways are a service or a business appears to have been settled.

\*The Maritime Freight Rates Act, originally passed in 1927, provides for subsidies to be paid to railways on local traffic within the "select territory" (i.e. the four maritime provinces plus part of Quebec), on westbound domestic traffic originating within the "select territory" and on all export traffic originating within the "select territory".



# ONTARIO'S RAIL NETWORK AND INFRASTRUCTURE



*Railway yards such as the one above are an intrinsic part of rail operations.*

In terms of geographic coverage, Ontario's rail network has changed remarkably little since 1917 – the year when Canadians awoke to the realization that they had more railways than they knew what to do with. True, a number of branch lines have disappeared and even in the southern part of the province, passenger service for towns with fewer than 10,000 inhabitants has become the exception rather than the rule it used to be. Nevertheless, Ontario's railway map, with 9,700 route-miles or 23.1% of Canada's total, still reflects the boom of the late nineteenth and early twentieth centuries. The network can be roughly divided into five categories:

## 1. BRIDGING INTERPROVINCIALS

Like the arms of a giant letter Z, three sets of interprovincial and international lines traverse the province. At the top

of the curve, running from the Manitoba border in the west toward Montreal in the east, are the three lines originally conceived as parts of separate transcontinental services. Ontario has about 35 percent of this transcontinental rail spine – more than any other province.

Canadian Pacific, the oldest of the three lines, enters Ontario west of Kenora and runs 1,200 miles through Thunder Bay and Sudbury, past Lake Nipissing and along the Ottawa valley before crossing the border on its way to Montreal and the Maritimes. Parallel to Canadian Pacific most of the way and also linking Winnipeg via Thunder Bay with Ottawa and Montreal is what used to be the Canadian Northern, now part of the Canadian National network; and further north than either of the other two is the descendant of the National Transcontinental (now CN) which

follows a virtually straight line from Winnipeg to Quebec City.

Another set of main lines run along the busy route often referred to as the "Quebec-Windsor corridor". Its Ontario portion cuts diagonally across the province, from the Quebec border near Montreal in the east to the U.S. border at Windsor and Sarnia in the south-west. Here again, extensive duplication of service is part of the railways' legacy. For 90 miles from Oshawa to Belleville along the shore of Lake Ontario, the CP and CN lines run within hailing distance of each other, and west of Toronto, there are two CN lines to London with a CP line between the two.

Finally, Ontario's third major rail corridor has two lines running across southern Ontario from Windsor to the Niagara gateway. One belongs to Canadian National, the other is Canadian-owned, American-operated. Designed primarily as a shortcut between the States of Michigan and New York, the two lines have seen their traffic dwindle by more than half within the past few years.

Also in a state of decline is yet another American bridging line which links Erieau on the northern shore of Lake Erie with Sarnia and Windsor. Owned by Chesapeake & Ohio, it was originally part of a strategy to link Cleveland with the American midwest. There actually was a time when trains were ferried across Lake Erie, then ran to Sarnia and through upper Michigan to the shore of Lake Michigan to be carried by yet another ferry to Wisconsin and Minnesota.

## 2. TIE-LINES

Both major Canadian railways have a number of important lines designed to connect and supplement the inter-provincials. Two such lines (one CP, the other CN) run north from Toronto to Sudbury, another west from Sudbury to Sault Ste. Marie. The latter crosses the border to Duluth and continues to Minneapolis, the northern tier of U.S. states and back into Canada beyond the Lake of the Woods.

Another tie-line runs in a straight line from Goderich to Niagara and Buffalo. Its builders had great hopes that it might become an important link between the upper lakes and the State of New York – one of many railway-related dreams which failed to come true.

## 3. REGIONAL RESOURCE LINES

Virtually intact since the early days of the century are two regional lines built to serve the province's resource industries: the Algoma Central Railway which runs from Sault Ste. Marie north to Hearst, and the Ontario Northland Railway, built from North Bay to Cochrane and subsequently extended to Moosonee. Canadian National lines

link the ONR with Toronto in the south and with Montreal in the east.

## 4. RURAL BRANCHES

In spite of many abandonments, two clusters of branch lines survive in Ontario. One is a group of lines in mid-western Ontario often referred to as the Bruce lines which serve such centres as Owen Sound, Walkerton and Goderich. The second serves the Haliburton and Algonquin hinterland, an area rich in recreational facilities as well as lumber and mineral resources.

## 5. PORT-TO-HINTERLAND BRANCHES

Even before the main rail lines were built in the latter part of the nineteenth century, Ontario had a number of branch lines designed to link waterways which heretofore were the province's major transportation routes. Thus Ontario's first railway line was built from Toronto to Newmarket, to be extended to Collingwood as a land bridge between Lake Ontario and the upper lakes. A number of these early lines are still in use; Prescott to Ottawa is one, Port Stanley to London another.

## Double Tracking

Total mileage is only one dimension of a railway network's capacity; of great significance is the percentage of that mileage which is double-tracked. Double tracking eliminates the need for trains to wait on a siding for trains travelling in the opposite direction to pass, and therefore greatly enhances the flexibility and potential efficiency of any given line. It is significant that Canadian National has 30%-60% more trains running in the Quebec-Windsor corridor than does Canadian Pacific. The CN line is double-tracked; most of the CP line is not.

Ontario has a total of approximately 1,100 route miles of double track. This mileage includes:

- The CN line from the Quebec border through Toronto to Windsor and Sarnia (510 miles);
- The CN line from Hamilton to Niagara Falls (43 miles);
- The CP line from the Quebec border to Smith's Falls (80 miles);
- The CP line west of Thunder Bay to the Manitoba border (320 miles);
- The Conrail line from Windsor to Niagara (220 miles);
- Most lines within Metro Toronto.

## TO SUM UP:

Ontario has 23.1 percent of Canada's railway mileage, somewhat less than the province's share in terms of population. A high proportion of that network consists of main lines, and duplication of service along some of these lines means that the geographic coverage is

less extensive than the 9,700 mileage might indicate. On the other hand, Ontario does not have the tight web of underused branch lines prevalent in the prairie provinces; their function has been largely superseded by roads and highways.

The potential utilization and flexibility of any rail line is vastly enhanced by double tracking. Ontario's share of double trackage, comprising one entire main line and portions of several others, is larger than that of any other province.

### **The Roadbed**

The quality of rail service depends, to a considerable extent, on the quality of the track or roadbed. The roadbed consists of four major components, each with a specific function to perform. They are:

#### **RAIL**

Until recently, most rails used in North America came in 39-foot lengths connected by joint bars and bolts. Such joints require constant maintenance and can cause deterioration of the rail ends, ties and ballast. Many derailments have, in fact, been traced to faulty or worn rail joints.

The railways have recently been replacing such rails with continuous welded rail, produced in lengths of approximately a quarter of a mile, which provides a much smoother and safer ride. Close to 90 percent of the new rail laid in 1978 was of the CWR variety.

#### **TIES**

Most Canadian track ties are pressure (creosote) treated timber, and Canadian railways have occasionally been criticized for failing to use the concrete ties favoured in Europe and Japan. It is only fair to say that the Canadian practice is not without merit, particularly in Ontario where hardwood maple and oak have all the required qualities of toughness and resistance to environmental or climatic enemies.

However, a pilot project in Jasper showed that concrete ties are decidedly preferable to the softwood available in western Canada, particularly in areas where trains carry heavy tonnage around curves. Concrete ties have the additional advantage of lower maintenance costs than timber, and their previous tendency to crack when subjected to extreme cold and heavy axle loads has recently been overcome. It is significant that the north-eastern corridor in the United States, which is designed to carry high speed passenger trains, is being built almost exclusively with concrete ties. In Ontario, CN has used concrete ties in the track improvement of the main line near Kingston.

#### **RAIL FASTENINGS**

The rail is fastened to the tie by spikes whose head is shaped to hook over the rail flange. Steel tie plates, placed between the rail and tie, reduce the pressure by spreading the load of a passing train over a larger area of the tie.

The weakness of this system lies in the danger that, under the constant pounding of freight trains, spikes can work themselves loose. Worn ties which will no longer hold a spike and have to be replaced account for a large percentage of the Canadian railways' maintenance costs. European railways, as well as AMTRAK in the United States, use much more durable fasteners which screw into concrete ties equipped with appropriate fixtures. Spikes have nothing but friction to hold them in place.

#### **BALLAST**

The function of the ballast underneath the ties is to distribute further the weight of passing trains. Ideally ballast should be tough, resistant to frost and chemical action, heavy and angular, so that it will interlock. The sulphide slags around Sudbury provide excellent ballast suitable for use under high speed passenger trains as well as heavy freight traffic.

The desirable depth of ballast depends on the resistance of the soil and the weight and speed of the trains. At present, the ballast on Canadian main lines is often substantially less than the 12 inches recommended for track carrying high density heavy traffic, not to mention the 16 inches recommended for high speed passenger trains. Both Canadian Pacific and Canadian National are currently engaged in extensive programs of ballast upgrading.

#### **Roadbed and Rail Speed**

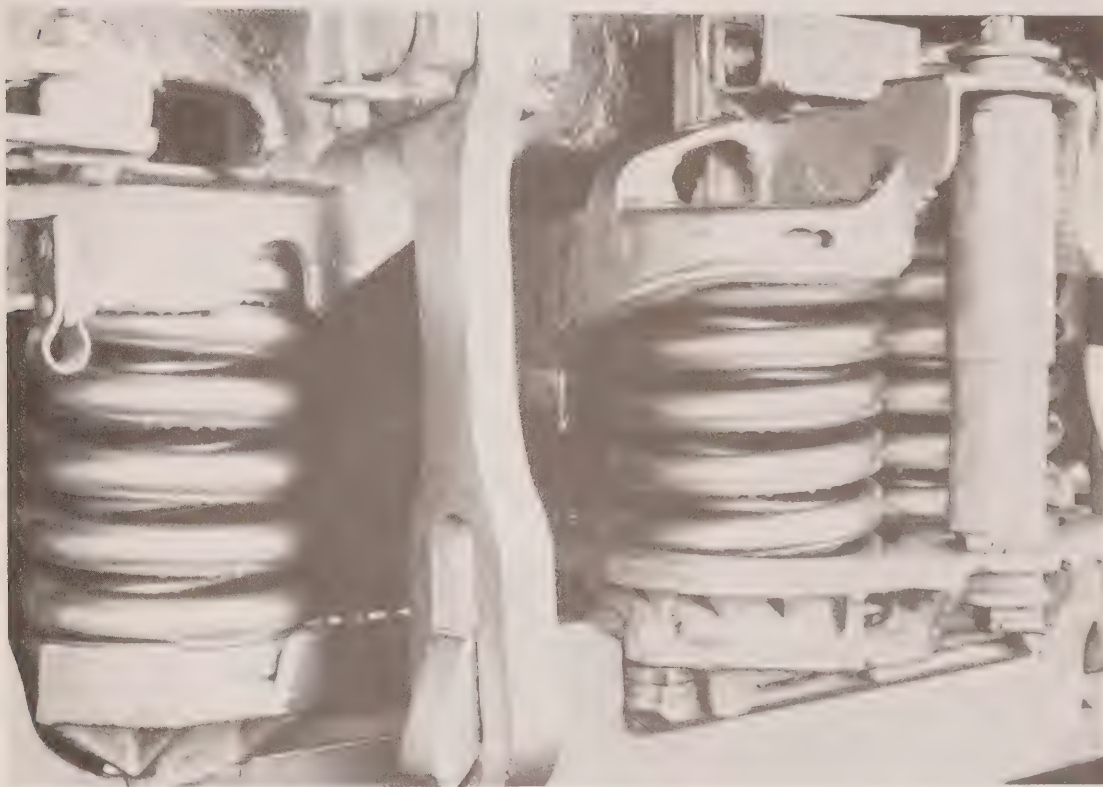
A sizeable percentage of Ontario's rail network can only carry traffic at speeds of 30 miles per hour or less. While the speed at which a train can travel depends on a number of factors, not all of them related to the quality of the roadbed, the fact remains that the construction of the track, the weight of the rails and the level of maintenance are among the most important considerations.







## RAILWAY EQUIPMENT, OPERATIONS & TECHNOLOGY



*When it comes to Research and Development, railways have a hard time competing for funds with more glamorous modes of transport.*

The newfound emphasis on profitability, blessed by the National Transportation Act, has reinforced the Canadian railways' long-standing preference for the movement of freight rather than people. Convinced that the country's vast distances, low population density and addiction to the private motorcar all conspire against a viable passenger service, Canadian railways have for much of the post-war period been willing, not to say anxious to relinquish the passenger field to their competitors. This attitude is in marked contrast to the one that prevails in Europe and Japan where railways consider themselves to be in the business of transporting people first and goods second.

Even within the freight area, some operations are clearly more desirable than others. Most attractive from the railways' point of view is the long distance transport of bulk commodities such as coal, preferably in unit trains travelling without interruption from mine to a single destination. No other land transport mode can compete with the railways for this type of traffic which involves a minimum of handling and therefore relatively low labour costs. The more efficient the railways

can make the service, the more profitable it becomes.

Next in order of preference are block trains which carry a mixed load but nevertheless travel without disturbance the full distance from one point to another. Also highly desirable from the railways' point of view are express trains which carry piggyback trailers at relatively high speeds and enable the railways to compete with trucks for door-to-door service. At the bottom of the profitability rating are way freights which pick up and unload mixed freight at a variety of stops along the way.

The orientation toward profitability and the resulting emphasis on the transport of specific types of freight are reflected in virtually every aspect of the railways' equipment, operations and technological development. In almost every instance where change has occurred, its objective has been to maximize the utilization of equipment or to minimize the cost of fuel and/or labour.

### **Freight Rolling Stock**

The last major change in freight locomotives used by Canadian railways dates back 20 years when the

dieselization program was completed. Since then, the main development has been a dramatic increase in the locomotives' size, weight and power; instead of the typical 1500 hp unit of the early 1960's, the railways are now more likely to buy one equipped with 3,000 or even 3,600 hp.

These mammoth locomotives are pulling increasingly heavy and large cars. The capacity of the average covered hopper car used by both CP and CN has increased from 68 tons in 1962 to over 93 tons in 1980. The number of cars per train, and therefore the trains' total weight, is also on the increase; 12,000 to 15,000 ton freights are no longer uncommon in Canada and the United States. According to a Canadian Pacific submission to the Task Force, the number of cars per freight train increased by 28 percent in the years 1965 to 1978; the trains' average weight was up 57 percent in the same period.

Because the pounding inflicted by heavy freight trains on the roadbed is incompatible with smooth high-speed passenger service, European railways limit axle loadings to weights well below those prevalent in North America. European freight trains are shorter and lighter than ours, operate more frequently and run at higher speeds. Even the Soviet Union, whose geography and climate are comparable to Canada's, imposes limits on the weight of commodity trains.

Apart from being larger and heavier than ever before, North American freight cars are also more likely to be designed to carry specific commodities. The change is exemplified by the 100-ton open-top "bath tub" coal car developed by CP Rail, or the covered grain hopper developed jointly by CP, CN and Transport Canada.

Highly promising from the technological point of view is the development of the articulated truck, which allows axles to align themselves radially when negotiating a curve. On a conventional railway car, wheels are rigidly parallel, and the resulting sideways pressure on the rail causes "squealing", heavy wear and occasional derailments. The articulated truck, which overcomes these difficulties, is now being tested in Canada and in the United States.

### **Intermodal Traffic and Equipment**

Under the impact of rising fuel prices, intermodal traffic (piggyback and containers) is growing rapidly both in North America and in Europe. Canadian National revenues from this type of traffic jumped 16.8 percent in 1979 for a total increase of 60 percent over the past five years; according to CN Rail President, R.E. Lawless, intermodal services are growing at almost twice the

rate of other rail services.

The railways are confident that piggyback will continue to capture a growing share of the long-haul freight business. Even containers, whose use in the past has been confined essentially to overseas shippers, are showing signs of catching on in North America. Canadian Pacific foresees a growing trend toward containerization, and is backing this forecast with an order for 275 specially designed container flatcars. In Germany, Task Force members were told that intermodal traffic, mostly in the form of containers, is expected to grow throughout the 1980's at an annual rate of up to 20 percent, and some prophets predict that, eventually, containers (or their equivalent) and standardized under-frame/wheelset units may replace conventional freight rolling stock on both sides of the Atlantic.

Among the innovations spawned by intermodal traffic, perhaps the most radical is the Bi-modal Corporation's Road Railer, a 45-foot trailer equipped with a rail coupler and a set of railway wheels to supplement its highway wheels. Either set of wheels can be raised or lowered by inflating or venting sets of air springs. Now being tested in the United States, the Road Railer with its reduced weight and lower air resistance is expected to cut conventional piggyback fuel consumption by 44 percent.

Also important is a piece of equipment developed for use in the railways' intermodal terminals. In the past, a bottleneck which deterred many shippers from using piggyback was the long time it took to load the trailers onto the train and to unload them at their destination. A tractor had to push each trailer up a ramp at the tail end of the train and move it the full length of the train before it could return to pick up the next trailer. Now large intermodal terminals such as CN's in Brampton are equipped with "cherry-pickers" – special cranes which can load or unload a trailer anywhere along the train in approximately 60 seconds.

### **Automation**

Technological advances have enabled Canada's railways to achieve major improvements in the efficiency of their freight operations. One such development is the automation of classification yards.

The function of a classification yard is to receive mixed-freight trains, break them up into components, place them on tracks corresponding to their destinations and reassemble them into trains headed for those destinations. In conventional classification yards, a switching engine pushes or "kicks" each car onto its individual

track and then releases it to coast into position. If the coupling speed is to be controlled, it must be done by an operator who rides in the car and applies manual brakes.

The modern version of a major classification yard is a "hump yard" where cars roll downhill from a hump to their proper track, with electro-mechanical "retarders" built into the track to make sure that the coupling speed does not exceed four miles per hour. Apart from being fast (a few seconds per car) and fuel efficient, the system virtually eliminates any damage to cars or their contents. The principal manpower involved are people in the control tower who monitor the number of cars on each track, their weight and configuration. CN has five hump yards, CP has three.

Automation has also resolved another of the railways' major problems: knowing how many cars are available, where they are and where they are needed. In the past, the non-availability of such information has resulted in poor utilization of equipment and needlessly large car fleets. Not only do the new computer systems enable the railways to keep track of their cars and match them with requirements; they also provide customers with information (via on-line terminals) as to the location of their shipments.

Automated car control has produced gratifying increases in the railways' freight car productivity. On CN, for example, the car cycle (number of loaded trips made by a car, divided into 365 days) has dropped from 17.2 days in 1975 to 12 days in 1979. This represents a potential saving of 12,000 cars, worth approximately \$540 million.

### Passenger Rolling Stock

According to a recent statement made in the House of Commons by the Parliamentary Secretary to the Minister of Transport, almost two thirds of the rolling stock used by VIA Rail is 26-30 years old, and all passenger diesel locomotives have passed their twenty-first birthday. VIA's only relatively recent acquisitions are the stainless steel Tempo coaches in service between Toronto and Windsor, and the remaining two United Aircraft Turbo trains still operating between Toronto and Montreal.

Railway equipment is much more durable than motorcars or airplanes; if properly maintained and refurbished, a locomotive or rail coach can still be in good operating condition after 30 years of service. Self-propelled vehicles such as VIA Rail's Budd Rail Diesel Cars are a case in point. With two engines, driving compartments at both ends of the car and the ability to move in either direction (thereby

avoiding costly and slow turn-arounds at terminals), they provide a relatively fast, economical, and versatile service on low density routes even though they are more than 25 years old. The proposed rehabilitation program designed to overhaul and refurbish VIA's extensive fleet of self-propelled RDC cars makes good sense. Slow to get under way (it has been on the drafting boards since 1976), the renewed RDC's could provide a desirable complement to VIA's passenger fleet, if the work is ever completed.

Nevertheless, the apparent willingness on the part of the railways to let their equipment wear out or become obsolete is symptomatic of the low priority rating accorded to passenger services. VIA Rail does have on order 50 LRC (Light Rapid Comfortable) coaches and 22 locomotives developed jointly by Alcan, M.L.W. and Dofasco. The equipment is officially due to be delivered in 1981-82 and once in service, it should help make passenger service look more modern and feel more comfortable.

In terms of technology, however, the LRC represents at best a modest advance. Though the coaches tilt to allow for greater speed on curves (the track is relatively straight between Toronto and Montreal), this advantage is largely negated by a locomotive which, for all its shiny aluminum coat and streamlined design, is basically a conventional diesel. Moreover, considered opinion suggests that the weight of the locomotive is such as to preclude speeds over 95 miles per hour without inflicting unacceptable damage to the track; in spite of its power to run much faster, its speed will therefore not be as great as the Turbo, which actually has the capacity to travel up to 140 miles per hour.

The weight of the LRC locomotive is in marked contrast to passenger equipment recently developed in Europe and Japan. The British Railways' diesel-electric High-Speed Train (HST), which operates at speeds up to 200 km/h, the French National Railway's electrified TGV scheduled to provide 260 km/h service between Paris and Lyons, or Japan's electrified *Bullet Train* whose latest prototype has reached speeds of 319 km/h all feature reduced wheel loadings. Their lighter weight translates into better braking and acceleration performance, less wear, less damage to track and smaller maintenance costs.

### Signalling and Control

Though the prime objective of signalling is to ensure the safety of trains, modern systems are also designed to enhance the capacity of railway lines. The level of signalling sophistication depends on the



frequency and speed of traffic plus, it seems fair to say, the importance attached by the railways to this aspect of their operations.

The main element in modern signal systems is the "block" – a length of track to which entrance is governed by wayside or in-cab signal indicators. In an automatic block system (ABS), a weak electrical current is short-circuited when a train enters a block, causing the signal to change from green to red and warning subsequent trains to wait for clearance. This system, which is primarily designed to avoid rear-end collisions, is still widely used in Ontario. A part of the CN Toronto to Sarnia line, for instance, has an ABS signalling system.

More sophisticated than ABS is centralized traffic control (CTC) which enables a dispatcher at a central console to monitor the location of trains within hundreds of square miles, and exercise remote control over switches and signals. While ABS would keep a fast passenger train idling at a safe distance behind a freight train until such time as the freight reached a town where it could be switched to a siding, the CTC dispatcher can arrange on a double tracked line to switch the slow freight to the other line and allow the passenger train to pass. However, the train crew must still watch out for wayside signals – a difficult task at high speeds or under adverse weather conditions.

In Ontario, the CN's Toronto-Montreal line is CTC, and so are long stretches of single track on CN's main lines in the north. CP Rail's single track main lines are mostly CTC while its double track main lines are ABS. Most of the non-mainline trackage is unsignalled, leaving trains to rely on timetables and telegraphed train orders.

Only in rare instances are signal indicators duplicated within the locomotive cab, with automatic train control (ATC) which provides for the locomotive to respond automatically and apply its brakes should the engineman fail to obey directions. Various forms of ATC are widely used in high-speed, high-density services in Europe and Japan, to a lesser degree in U.S. high density corridors.

### Motive Power

Since the demise of the steam engine, virtually all locomotives used by Canadian railways have had a diesel motor as their prime mover. The diesel motor drives a generator or alternator which produces the current used by electric motors to drive the wheels. These diesel-electric locomotives have proved remarkably durable and reliable under adverse weather conditions. Their major drawback is the weight of the diesel motor which limits speed and inflicts considerable wear on the

track. Their fuel consumption, while modest compared to most other transportation modes, is nevertheless an important consideration. In 1979, Canadian railways consumed 490 million gallons of diesel fuel.

Unlike diesel-electrics, turbine powered locomotives have axles driven directly by turbine engines. The only locomotives of this type now operating in Canada are part of the two Turbo trains which provide passenger service between Toronto and Montreal. Turbine powered locomotives are lighter and faster than diesel-electrics; but for several years, the Turbo seemed singularly accident prone in Canada, and its performance, particularly in cold winter weather, left something to be desired. Though the remaining two trains (prototypes of a model never placed in general production) now provide satisfactory service, Canadian National has clearly abandoned any plans it may have had to acquire more of them.

More efficient than either diesel-electrics or gas-turbines are the electric locomotives used in many parts of the world. Electric locomotives derive their power from overhead wires (catenary) rather than on-board generators, and are therefore much lighter than diesels. This weight advantage results in lower maintenance costs for both locomotive and track, less deadweight to be accelerated or braked, extra power and quieter operation. Electrification also substitutes a plentiful (in Ontario) form of energy for one which is increasingly expensive and scarce.

Ironically, Ontario had a partially electrified rail network long before dieselization was even dreamed of. It started with the St. Catharines-Thorold line in 1887, and by 1925, fully 1,737 miles of Canada's interurban railways were electrified; but dieselization virtually wiped out what might have been the basis for a fully electrified rail system.

Meanwhile overseas countries with the most modern railways, including Japan, France and West Germany, have electrified large portions of their networks. Virtually all the high speed passenger trains throughout the world use electrified lines, and these lines characteristically carry the largest proportion of their respective countries' traffic. In Austria, for instance, 90 percent of the traffic is carried on the 49 percent of the system that is electrified.

### Research and Development

When it comes to research and development, Canada is not a generous country. In 1977, \$174 million was spent on all transportation R & D, or approximately four tenths of one percent of the \$42 billion which



transportation contributed toward the GNP. Even within this limited field of activity, railways were clearly unable to compete with more glamorous transportation modes such as air travel. Total rail-related R & D funding, by railways as well as other sources, amounted to less than \$10.5 million; this represents six percent of all transportation-related R & D for the year, or three tenths of one percent of the railways' gross revenues for 1977.

With such meager financial commitment, it is hardly surprising that the railways' record as technological trail blazers is far from impressive. Though they have achieved some important advances in the operation of yards and the automation of car control, much of their "research" activity consists of monitoring product and component quality and dealing with short-term problems. There is little evidence, for instance, of a concerted effort to take advantage of what should be one of the railways' major trump cards: their ability to maintain service regardless of weather. When a snow or sleet storm brings both highway and air traffic to a standstill, trains should offer an attractive and reliable alternative; instead, all too often, they are delayed or stopped by frozen switches, snow-clogged track or frozen water lines.

Canadian railways lag far behind many industrial countries in the importance and financial support accorded to rail-related R & D. In France, seven percent of the railway industry (some 1,500 people) were employed in research in 1975; in Britain, a professionally staffed Railway Technical Centre, strongly supported by both British Railways and the Department of Transport, has played a leading role in the development of the country's high-speed passenger trains. In Japan, the JNR Technical Research Centre is engaged in a broad range of research projects; JNR also operates its own fully-accredited degree granting university which provides the railways with a steady flow of young engineers and managers.



## INTERCITY PASSENGER SERVICE



*As the cost of fuel rises, more people can be expected to travel by rail.*

Early last May, a member of the Task Force staff decided to put Ontario's passenger service to a test: he would travel to a meeting in Lansing, Michigan, by train. His Toronto travel agency tried to dissuade him from undertaking this venture, urging him to go by air or bus instead. When he persisted, the agent agreed to provide him with a VIA Rail ticket to Sarnia. Train schedules for AMTRAK, the American railway which would have to carry him the rest of the way, were not obtainable from VIA and neither, of course, were reservations or tickets.

The trip turned out to be an expensive and time consuming exercise. Our traveller arrived in Sarnia at night, at a remote station shrouded in darkness. The taxi ride (there is no bus) to Port Huron, across an international toll bridge, cost him \$14 and a hotel room for the night set him back another \$32.50. All in all, he paid as much for taxis and overnight accommodation as for his train fare. Taking a morning train out of Toronto would not have helped; he would have arrived in Sarnia at noon, much too late to catch the 6.15 a.m. train out of Port Huron.

The incident illustrates the shrinkage, in scope as well as in convenience, of Ontario's rail passenger services. Twenty years ago, the train would have proceeded from Toronto to Sarnia, through the St. Clair River tunnel to Port Huron and on to Lansing, and thence Chicago – where travellers could board connecting westbound trains. The Sarnia-Port Huron tunnel is still there, and CN uses it as a link

with the Chicago-bound main line of its U.S. subsidiary, the Grant Trunk Western. But its use is now confined to freight trains.

Similar cut-backs have become commonplace throughout southern Ontario. In large parts of the province, passenger service for any community with a population of less than 10,000 is now a rarity, and even important cities such as Cambridge, St. Thomas, Owen Sound and Lindsay depend exclusively on highways for intercity travel. Gone are the passenger trains which once served the Bruce peninsula and the Algonquin hinterland; railway stations have been disappearing without a trace, and in a town like Bracebridge (1978 population: 8,500), which is fortunate enough to have a passenger train stop on its way from Toronto to North Bay at five minutes after midnight and from North Bay to Toronto at 5.30 a.m., there is not even a shelter in which to take refuge while waiting for the train to arrive.

The abandonment which had been scheduled for September 29th, 1980, of the Toronto-Hamilton-Buffalo service would have spelled the severance of Ontario's last passenger rail link with the United States. Had a public outcry not caused the Canadian Transport Commission to suspend its decision, travellers arriving at the Niagara gateway en route to Buffalo and other New York State destinations would have been no better off than the ones going to Detroit via Windsor or to Chicago via Sarnia. In each case, they would have had to

make their own way across the border and hope to find another train once they got there.

Only the two corridors running east and west from Toronto still have a choice of passenger trains serving cities such as Kingston on the way to Montreal, or London on the way to Windsor or Sarnia. Indeed London, with 22 passenger trains arriving and departing every day in four directions, enjoys better passenger service (in terms of frequency and speed) than any Ontario city other than Toronto.

### **Northern Ontario Service**

In Northern Ontario, unlike the south, four-fifths of the rail mileage still carries passenger traffic. Here, passengers can board the Canadian in Sudbury and travel hundreds of miles via Thunder Bay and Kenora to Winnipeg. Alternatively, they can take the more northerly CN Supercontinental out of Capreol, near Sudbury, and go to Winnipeg through communities such as Hornepayne, Nakina and Sioux Lookout which owe their existence to the railway boom of years gone by. Also intact are the passenger services operated by Algoma Central from Sault Ste. Marie to Hearst and by the Ontario Northland Transportation Commission from North Bay to Cochrane and Moosonee. Among the few passenger lines in the north that have been abandoned, the one which appears to be most sorely missed is the link between Sault Ste. Marie and Sudbury with its connection to Toronto.

If northern Ontario has largely escaped the retrenchment in passenger services which has been so prevalent in the south, it was not for lack of trying on the part of the railways. Repeated attempts to discontinue or cut down on the frequency of the transcontinental services, which the railways claim account for the bulk of their passenger losses, have led to some modifications; but when the Canadian Transport Commission recently ordered VIA to resume through service along the Capreol to Winnipeg line, it in effect reaffirmed the special needs of the north, and served notice that the Supercontinental must be maintained. For historical, strategic and economic reasons, transcontinental trains are a vital part of Canada's identity.

### **Thirty Years of Decline**

The decline in passenger services dates back to the post-World War II period when the railways suddenly found their passenger business eroded by competition from buses, airlines and, above all, the private automobile. By 1952, the railways' share of intercity traffic had dropped to half the level of 1944; by 1958, it was down

to little more than a third. "On the long-distance passenger service the airlines have got us licked to a frazzle," CNR president Donald Gordon informed a parliamentary committee in 1960.

Even more determined was the onslaught of the motorcar in the short and medium distance travel market. In 1945, Canadians did less than half their travelling by automobile; by 1958, the car had captured 87 percent of the passenger business – a market share which, incidentally, has declined only marginally in the intervening years. Faced with multimillion dollar losses, the railways put their case to the MacPherson Commission in 1960: Canadians should either ride passenger trains or do without them.

The commission agreed that the railways could not be expected to absorb the losses from unprofitable services. In the words of the commission's report, "The competitive environment in the transportation industry has made it impracticable for the railways to continue to accept the great burden – dictated not by economic considerations, but by social, political and traditional pressures – which is involved in the maintenance of rail passenger-train services." Accordingly, the MacPherson Commission recommended that the railways should be allowed to phase out all passenger services except those where no alternative form of transport was available. In the latter case, they should be compensated by Parliament for their losses.

By the time this recommendation found its way into the 1967 National Transportation Act, it had undergone substantial change. According to the Act, the newly formed Canadian Transportation Commission was to determine which passenger lines were essential to the public interest and therefore had to be maintained. The federal government would subsidize 80 percent of the losses incurred by the railways on those unprofitable lines which they were ordered to operate.

Meanwhile, Canadian National had made a valiant attempt to revitalize its passenger operations. During the early and mid-1960's, it accelerated its Toronto-Montreal Rapido service, introduced red, white and blue fares designed to attract off-season and middle-of-the-week travellers, mounted a major marketing campaign and made plans to lease five United Aircraft Turbotrains for the Toronto-Montreal run. For a while, it seemed as though CN might actually succeed in luring enough passengers back to the railways; a 2.6 percent increase in ridership in 1966 was followed by a 24.3 percent jump in passenger revenues the following year. But mounting costs, a renewed drop in



traffic following the Centennial Year boom and the new Turbo's repeated breakdowns dispelled any ideas the railway may have had about turning passenger operations into a profitable proposition. Canadian Pacific had already, to all intents and purposes, renounced any claim to the intercity passenger market when it terminated the pool train arrangement which the two railways had operated jointly on some key routes; by the end of the 1960's, CN too seemed to have reached the conclusion that the best way to deal with the passenger business was to get out of it.

The compromise solution embodied in the National Transportation Act did little to improve the situation. Though the railways were now collecting massive subsidies for their passenger services, they were unhappy about the 20 percent of the losses which they still had to absorb. By the end of 1971, the CTC had received 69 discontinuance applications covering virtually all passenger services in Canada, and had dismissed most of them. Whether ridership continued to decline because the railways allowed their services to deteriorate or vice versa is a moot point; but there can be no doubt as to the resulting burden which the country's taxpayers had to carry. In 1975, when the railways' share of the passenger market was a dismal 1.7 percent, total payments to CN and CP for uneconomic passenger services added up to almost \$162.5 million; by 1976, the figure was up to \$181.7 million and Transport Canada estimated that, unless something were done to arrest the drain on the public purse, subsidies would amount to \$400 million by 1980.

### **Via is Born**

It was this situation which led in 1977 to the creation of VIA Canada Rail Inc., a company designed to amalgamate, manage and "rationalize" all passenger services (other than commuter services) previously operated by the two major railways. Originally conceived as a CN subsidiary, VIA was transformed a year later into an independent Crown corporation.

Under the current arrangement (which expires in 1981), VIA is responsible for the management, planning, marketing and catering functions, while CP and CN are committed to provide the infrastructure and to operate the trains on a contractual basis with VIA. It is worth noting that the existence of VIA does not relieve CP and CN of their statutory obligation to provide passenger services if, for any reason, VIA should prove unable to do so.

VIA derives its income from passenger fares and from contracts which it negotiates with the federal

government on a route-by-route basis. Besides providing VIA with sufficient funds to make up the difference between the budgeted costs of a service and the revenues it is expected to generate, contracts are also to include incentive payments to promote efficiency, better service and higher sales. The net result, according to a Transport Canada report to Treasury Board, should be that "CN and CP will now be compensated in such a way that the 20% loss disincentive will be removed and they will be motivated to improve performance."

### **Quality of Service**

It is clearly too early to say whether Transport Canada's forecast was realistic. Certainly the fact that the two railways are now reimbursed in full for the passenger services and facilities they are required to provide has had a healthy effect on their profit and loss statements. The \$55.2 million passenger service loss which Canadian National reported in 1978 shrank to \$9.1 million in 1979 (VIA's first year of operation) and "should be zero in 1980".\*

Whether this improvement in the financial picture has been matched by an upgrading in the quality of service is another question. True, railroading is a capital-intensive business, and the railways claim they are spending hundreds of millions of dollars on maintenance and renewal programs. But the lion's share of that money is designated for improvements relating to the movement of freight, though passenger services do benefit from such activities as the laying of continuous welded rail and reballasting.

However, the bulk of the complaints about the quality of passenger services received by the Task Force and by the news media (in response to a background paper prepared by the Ministry of Industry and Tourism and released during the summer) concern matters which could presumably be remedied without the investment of vast amounts of money. Service to the physically handicapped is a case in point. In response to complaints, the Canadian Transport Commission has ordered VIA Rail to provide manual lifting for physically disabled travellers at 13 stations across Canada within three months of April 24, 1980. The Ontario stations included within this directive are Ottawa, London, Windsor and Toronto. VIA has also indicated that it intends to fit some of its rail diesel cars with lifts on both sides for the benefit of the handicapped, and modify the cars' interiors to provide for safer transport.

Reservation and ticketing practices

\*Metro Board of Trade Journal, Summer, 1980.

are another source of aggravation. There was a time when people could call their local railway station to get information about train schedules and to reserve a seat. Not anymore. The \$9 million Reservia system, vaunted by VIA executives as a marvel of efficiency, requires Ontario passengers to call a toll-free number in Toronto and, according to an overwhelming body of evidence, listen to seemingly interminable recorded music before an operator becomes available. The travellers' frustration is compounded when they are told they must arrive at the station at least an hour before the scheduled departure time, which may or may not be the time the train actually leaves. Then comes the final insult: boarding the train at an intermediate stop, passengers with "reserved" tickets sometimes find that there are no seats, or at least that there is no one to help them find one. A Task Force member travelling from Kingston to Toronto was told that there was no food left, either.

Punctuality, or "on-time performance" in railway jargon, is also the subject of many complaints. According to one set of figures,\*\* the average delay during February and March, 1972, was 12 hours on transcontinental trains, one hour on the Toronto-Montreal Rapido. While 1972 figures are obviously not particularly pertinent, Task Force members tried in vain to obtain current information about the railways' efforts to resolve the problem. Unlike AMTRAK in the United States, VIA does not include "on-time performance" information in its annual report and apparently does not make it available even to such agencies as Transport Canada. While this information may be available to the CTC, it is not public, since most of the CTC's data base is confidential.

In reply to the complaints, a VIA executive explains that the reservations system and ticketing machines have experienced "teething" problems which should be dispelled by the retraining of VIA ticket agents and with the installation of additional telephone lines. Perhaps VIA should also consider mounting a course for travel agents, so that they will be both able and willing to provide clients with information about trains, rather than urging them to go by plane or bus instead.

### Utilization

Travellers' complaints notwithstanding, VIA can point to one impressive accomplishment: between 1976 (the last year CN and CP were entirely responsible for rail passenger services) and the end of 1979, passenger traffic

increased by 34 percent and by the end of 1980, the growth figure should reach 40%. After more than a decade of almost continuous decline in passenger traffic, there are definite indications that Canadians are travelling by rail in greater numbers than they have since they awoke from the euphoria of Centennial Year. According to president Frank Roberts, VIA Rail will carry this year more than 6,000,000 passengers. In Mr. Roberts' own words, "surely we must be doing something right."

The question is: what? What is it that makes a traveller choose one means of transportation in preference to another? Clearly the choice is governed by a number of factors including distance, cost, availability and quality of alternative means of transport, and the purpose of the trip. On a short trip such as Toronto-London, air is not a serious contender. A large majority of people choose to drive, but many others find the rail service fast, reliable and (because of the downtown station and coordinated train schedules) convenient. On this particular route, rail carries more passengers than the airlines and buses combined.

On the longer distance between Toronto and Montreal, the time-saving offered by air travel is significant. In the absence of a high speed rail service comparable to the one in Japan and some European countries, there is no other way to commute back and forth in one day, and transact a day's business in between. Besides, the briefcase brigade which constitutes the bulk of this commuter traffic generally enjoys expense account privileges and therefore does not worry about rising air fares. However, the rail service is reasonably fast, convenient and inexpensive. Result: air is the most popular among the public carriers (only slightly less popular than the automobile), but rail has a considerably larger share of the market than buses.

Business travel is also an important component of the Toronto-Ottawa traffic. But while travellers who want to go by rail to Montreal have a choice between several main line trains to cover the 335-mile distance in five hours or less, anybody taking the train to Ottawa is in for a slow and frustrating experience. The train leaves Toronto three times a day and makes reasonably good time as far as Brockville. From there on, however, it is switched, first to a poorly aligned CP branch line, then just outside Smith's Falls to a CP main line and, on the far side of Smith's Falls, to a CN branch line. By the time the train finally limps into Ottawa's suburban railway station, miles away from the city centre, it has taken two hours and 20 minutes to cover the last 68 miles at an average

\*J. Lukasiewicz: "The Railway Game" p. 91.

speed of 30 miles per hour. Total travel time for the 276-mile trip: six hours and 25 minutes.

It is small wonder that the rail share of the passenger market between Toronto and Ottawa is only four percent, the lowest for any city pair in Ontario served by VIA. While air outdraws rail by a proportion of two to one between Toronto and Montreal, the ratio is closer to six to one between Toronto and Ottawa. Buses, too, enjoy a healthy edge over trains on this particular route.

### Future Prospects

Though the Toronto-Montreal rail corridor is the most heavily travelled in Ontario and, indeed, in Canada (more than 3,000 passengers daily), Toronto-Windsor is not far behind. While this corridor is less profitable for the railways, mainly because fewer passengers travel the full distance between Toronto and Windsor, it serves the high-density heartland of the province including important cities such as Guelph, Kitchener, Brantford, Stratford, Woodstock, and London. The short distance between these communities and rising fuel prices make air travel both uneconomic and impractical, particularly since a smaller percentage of the travellers have expense accounts to absorb the impact of repeated fare increases. Even buses, traditionally the most economical of the public carriers, are more vulnerable than railways to the price of oil-based fuels. The rail share of the passenger market in this corridor has already increased in the past few years, and can be expected to keep on growing.

Another factor which may be translated into increased rail patronage is the aging of the population. Like the country in general, Ontario today has more people aged 65 or over than ever before, and their numbers will grow substantially within the coming years. Research by the Ministry of Transportation and Communications as well as mail addressed to the Task Force clearly suggest that the older people get, the more likely they are to travel by train. Since the ability to visit friends and relatives is particularly important for this age group, they constitute a faithful and growing rail passenger market.

More important to the travelling public than any other factors are those of speed, convenience and quality of service. In spite of the problems experienced by the Turbo on its Toronto-Montreal run, in spite of frequent delays and the vibration caused by an inadequate roadbed, more than 30 percent of the rail traffic consists of business people who, presumably, like the downtown to downtown service provided by trains.

It seems reasonable to assume that many more would follow suit if the service were faster, punctual and more comfortable. Whether these conditions will be met by the LRC, now expected to go into service in 1982, remains to be seen. As already mentioned (see previous chapter), the new locomotives will be too heavy to compete with high speed trains of the Japanese or European variety; but the LRC should improve passenger comfort and, given an improved track plus the elimination of at least some of the level crossings, it could conceivably cut the travel time between Toronto and Montreal by as much as an hour.

In the final analysis, the viability of rail passenger services will be determined by the vast majority of the travelling public who, for short and intermediate distance trips, are still opting in favour of the automobile rather than any form of public transportation. Capturing part of that market might not wipe out VIA's \$232 million deficit; but then it is worth noting that neither in Japan (the Japanese Shinkansen between Osaka and Tokyo is the only profitable passenger line in the world) nor in Europe nor anywhere else in the world do passenger rail systems actually make money. What they do is attract enough of a clientele to make the cost worthwhile, particularly when compared to multilane highways or modern air terminals.

Can trains lure Ontario motorists out of their automobiles? The GO Transit experience suggests that it can be done.





## COMMUTER SERVICES:

### THE STORY OF GO TRANSIT



*Toronto's GO Transit system, which carries tens of thousands of people in and out of the city every day, is generally considered to be one of the finest commuter systems in the world.*

The creation of GO Transit was the first attempt on the part of a Canadian province to underwrite a commuter rail service that would cut through municipal and regional boundaries. The theory was that, by diverting motorists from highways, the commuter service would reduce the need for multi-million dollar expressways which the Province would otherwise have to build.

Thirteen years later, the validity of the theory has been proved many times over. GO Transit now serves an area with a population of 3.6 million and in 1979, 11.5 million passengers rode the green and white trains which converge daily on Toronto's Union Station. The original east-west Lakeshore route, inaugurated in 1967, was joined in 1974 by a north-west service to Georgetown and, in 1978, by a northerly route to Richmond Hill. A fourth line, running from Toronto along the CP line to Milton, is scheduled to start operating in 1981.

It is the 97-kilometre Lakeshore line, with its 16 stations between Hamilton

and Pickering, which remains the flagship of the system. Its trains run 19 hours a day Monday through Saturday (16 hours on Sunday) and provide service every 20 minutes during rush hours, hourly the rest of the time. Five years after its inauguration, the line's 1967 clientele had more than doubled to an annual total of over six million. For a time, it looked as though GO Transit might become a victim of its own success. The trains were so overcrowded that, highway congestion notwithstanding, there was a distinct danger that disgruntled commuters might revert to their automobiles.

The fact that this did not happen is due largely to a long-range plan developed in the mid-1970's, which was designed to increase the capacity of the Lakeshore line. Part of that plan was the replacement of existing coaches with double-deck cars with a seating capacity of 162, compared to 94 in the single-levels. A fleet of 80 double-deck cars, manufactured by Hawker Siddeley, was placed in operation in 1978.

### TATOA Enters the Picture

In 1974, the Provincial Government created the Toronto Area Transit Operating Authority (TATOA), a Crown agency with responsibility for integrating the GO Transit system with the transportation facilities and needs of the entire region served by the commuter trains. TATOA is an association of the Regional Municipalities of Peel, York, Durham, Halton and Hamilton-Wentworth, plus the Municipality of Metropolitan Toronto and the Province of Ontario. Until the creation of TATOA, GO Transit had been the responsibility of what was then the Province's Department of Highways, whose interest and expertise in railroading was, understandably, limited.

It had always been understood that the enormous expenditures required for the operation of commuter trains could only be justified on heavily travelled routes. At current prices, a ten-car train with locomotive costs more than \$10 million to acquire. If this kind of investment was to prove even remotely effective, the service would have to attract traffic from areas well beyond the immediate vicinity of the stations. One of TATOA's major objectives, therefore, was to coordinate GO trains with lower density feeder lines served by other transportation modes, both public and private.

GO buses, which started running in 1970 between Pickering and Oshawa at the east end of the Lakeshore line and between Oakville and Hamilton in the west, now provide service for cities within a 90-kilometre radius of Toronto including Streetsville, Guelph, Brampton, Barrie and Bowmanville. Free parking is available at all but three GO stations for 9,000 cars, "kiss 'n' ride" lanes help commuters to be dropped off at many stations, and bus loops with exclusive access for transit vehicles are being incorporated into the design of new stations. An integrated fare system launched on a trial basis, first in Brampton, then in Oakville, offers free transfer privileges between municipal buses and GO trains. If enough commuters take advantage of the opportunity to use public transit between their home and the rail station rather than clogging up parking lots with their cars, the integrated fare system may be extended to other municipalities.

From the time it came into being, TATOA was faced with the obvious inability of Toronto's Union Station (the destination and boarding point of more than 90 percent of weekday GO riders) to handle the rush hour congestion. The Toronto Transportation Terminal project, conceived in 1976, was designed to remedy the situation by redeveloping all passenger facilities in Union Station as well as the rail

corridor west from the station through Bathurst Street. The estimated \$68 million cost was to be born jointly by the Federal and Provincial Governments as a result of an earlier (1972) Federal election campaign policy commitment. When Ottawa decided a year later not to allocate any funds for the project, a modified scheme designed to meet the needs of GO Transit only was carried out and paid for with the \$38 million share provided by the Province.

### Who Should Pay for What?

The problems associated with the Union Station project were merely a prelude to what was to follow. For the first ten years of its existence, the commuter system operated under an agreement hammered out during two years (1967-68) of negotiations between the Province and Canadian National. It specified that the Ontario Government would compensate the railway for all required changes and additions to the CN plant plus a proportion of fixed expenses. There would also be a reasonable fee for management, administration and supervision, and for the use of CN's right-of-way.

Moreover, GO Transit assumed liability for accidents involving its rolling stock, regardless of who was to blame, and undertook to pay for construction of new plant capacity should the railway's currently idle capacity be required at some future date for CN's own operations. All GO-funded plant additions were to become the property of CN. The Ontario Government received no credit for relieving the railway of its costly responsibility to run two daily trains between Hamilton and Toronto.

All in all, it was a much tougher contract than early discussions had led the Province to expect – a far cry from 1963 when CN Vice-President J. A. McDonald had said in a published article that "Canadian National is willing to provide any form of commuter service on a contractual basis that will recoup expenses." But though CN's concept of "recouping expenses" seemed to have changed over the years, the terms of the contract were still preferable to the more costly alternative of acquiring property and constructing a new right-of-way. Although it was considered to be a "hard" agreement, the terms contained in this contract were benign, considering subsequent developments.

The contract between CN and the Province came up for renewal in 1977. By then, the National Transportation Act had been in force long enough for the railway to adopt a bottom line policy in keeping with its new commercial enterprise mandate. Profitability was now the name of the



game, and CN apparently saw no reason why it should not charge GO Transit a hefty mark-up for its services.

Another contentious issue concerned the new Richmond Hill line, where track and signal improvements went beyond the needs of the commuter service. How much of the cost should be born by GO and how much by CN, seeing that freight operations would share the benefits of the improvements? The railway would not agree to GO's request for an evaluation by an impartial mediator, and insisted that GO pay all but a small fraction of the bill.

Throughout the negotiations, which dragged on for 85 meetings spread over 19 months, TATOA found itself in the unenviable position of a captive customer. With a massive investment in rolling stock and railway plant improvements and with tens of thousands of people relying on trains to carry them to and from work every day, the Province was brought face-to-face with an ultimatum. In a letter dated April 6, 1977, CN Vice-President A.R. Williams informed the Ontario Minister of Transportation and Communications that "in the absence of a satisfactory signed agreement by 22 May covering GO Rail service by Canadian National, we will be obliged to discontinue GO Rail operations as of that date."

In the words of transportation consultant Andrew Elek in his report to the Task force, "once in place, commuter rail services form an integral part of the transportation system and ... the abandonment of rail services or a mere deterioration of the service could therefore cause severe damage to the public, to the commerce and to the industry of a city." The Province had no choice but to capitulate, and though the deadline was extended, a new 1977-87 agreement was signed in 1978. The new contract entailed drastic cost increases; on the Lakeshore corridor alone, the \$225,000 annual user charge jumped to over \$2.5 million, and fares had to be increased substantially in order to remain within sight of GO Transit's 65 percent cost recovery goal.

With gasoline prices and parking fees going up at the same time, most GO riders have apparently been willing to absorb the extra commuting cost; but growth in business has levelled off and further fare increases might well drive many people back to their automobiles or, if they cannot afford to drive, to new bus services which would presumably spring up to fill the vacuum. Highway congestion, fuel consumption and air pollution would all increase, to the detriment of the area, the province and the country as a whole.

GO Transit has proved that, given fast, frequent and reliable service, Canadians are willing to ride trains

rather than drive. As one TATOA official puts it, "the service does its own advertising when automobile drivers stuck in the traffic see the train go by at 50 miles per hour." GO has also proved that municipal, regional and provincial authorities can join forces, transcend their differences and give people the kind of commuter service they want and need. It has yet to prove that negotiations with the railways and with federal authorities can lead to mutual understanding and a possible extension of commuter services to other cities, on terms which are fair to everybody concerned.



## RAILWAYS AND THE ECONOMY



*A record volume of freight and improved prices contributed to multi-million dollar increases in 1979 revenues for the railways.*

Railways interact with Ontario's economy in three ways:

- As carriers of freight and passengers;
- As employers of tens of thousands of people;
- As purchasers of equipment and services.

### Railways as Public Carriers

According to the 1967 National Transportation Act, "An economic, efficient and adequate transportation system making the best use of all available modes of transportation at the lowest total cost is essential to protect the interest of the users of transportation and to maintain the economic well-being and growth of Canada."

In order to achieve this state of economic well-being, the Act in effect lifted most of the regulations which, in the past, had prevented railways from competing successfully with other transportation modes. Henceforth, they were to be free to charge virtually any rates the shippers were willing to pay\*, the assumption being that competition would keep the rates within reasonable limits. As for captive shippers who did not have access to alternative transportation modes, the

theory was that railways would rather limit their profits than risk putting a customer out of business.

To the extent that the objective of the legislation was to put the railways on a sound financial footing, it has clearly proved to be successful. Railway revenues have climbed steadily, and by 1977 had reached \$3.54 billion, an increase of 207 per cent over the \$1.15 billion recorded in 1960. The \$386 million margin of revenues over costs in 1977 represented a spectacular improvement over past performance. By concentrating on the long distance transport of bulk shipments and by discouraging business which they found less profitable, the railways were able to boost substantially their revenues even at a time when the economy was in the doldrums.

True, the railways are still unhappy about the Crow's Nest Pass agreement which compels them to haul western grain at rates which were set more than 80 years ago. Inflation has made these rates increasingly archaic, to the extent where CP and CN report that, in 1979 alone, the transport of grain cost them a total of over \$195 million. Canadian National President Robert Bandeen is also unhappy about the \$47.2 million loss suffered last year by CN Express.

But in almost every other way, 1979 was a vintage year for the railways. Increased shipments of coal, potash,

\*The law specifies that freight rates must be no less than 100 per cent of variable costs and no more than 250 per cent



iron ore, steel and sulphur more than made up for increased energy and labour costs. CP expects the annual volume of western coal carried to the Lakehead to reach 1.5 million tons in the near future. Piggyback and container traffic are also sources of growing revenues. CN President Robert Bandeen had good reason to be pleased when he told the Toronto Society of Financial Analysts that, in a year of high inflation and a national economic growth rate of only 2.8 per cent, Canadian National Railways had substantially improved its financial position. As for CP Rail, its net income of \$93.7 million was up \$30.2 million over 1978. According to CP's annual report, "a record volume of freight carried and improved prices were the major contributing factors to an increase in revenues of \$190.6 million."

### Captive Shippers

But the "improved prices" which contribute to the profitability of the railways spell higher costs and a threat to the viability of some of their customers. Where the railways compete with truckers for available business, shippers by and large seem satisfied that they are getting a fair deal. Indeed the railways' enhanced efficiency has resulted in savings which, in some cases, have been passed on to their customers.

But in areas where railways provide the only available means of transport, or where the alternatives are clearly uneconomical, there is a widespread suspicion that railways are exploiting their monopolistic position. This perception is particularly rampant in northern Ontario, whose resource industries are a mainstay of the province's economy. Because of the long distances between these industries and their markets, transportation costs have a major impact on the price of their products and on their ability to compete on the international market.

For instance: according to reports reaching the Ministry of Natural Resources, the railways' profit orientation is eroding the viability of the forest products industry. Not only are freight rates high, but sometimes the railways insist on either shipper-leased cars or on ten-year volume guarantees. "It would appear," says a letter from the Honourable James Auld to the Task Force Chairman, "that continual rate increases, often at rates substantially in excess of the general level of inflation, have not necessarily brought about any improved service or any additional cars to handle the product."

Shortage of equipment and unpredictability of service are also causing dissatisfaction within the mining industry. According to complaints received by the same Ministry, the railways can withdraw

equipment at any time, without notice, even if it has been available to the mining company for several years. "Lack of additional railway car supply can effectively deter a company from increasing the productive capacity of its mine" Mr. Auld said.

Even the Canadian Manufacturers' Association, whose commitment to free enterprise and unregulated competition is beyond suspicion, seems to be wondering if the system is working as well as it should. As R.B. Taylor, Manager of CMA's Transportation Department told a meeting of the Canadian Transportation Research Foundation, "the scant protection which was afforded the captive shipper proved less than adequate."

### Appeal Mechanism

The "scant protection" mentioned by Mr. Taylor consists of a procedure whereby captive shippers may appeal to the Canadian Transport Commission against freight rates which they consider excessive or discriminatory; however the National Transportation Act stipulates that an appeal may only be heard if the shipper can demonstrate that the rate being charged is prejudicial to the public interest. In the 13 years since the Act became law, the Canadian Transport Commission has decided only five appeals, all but one in favour of the plaintiff. Nine other cases were discontinued before they came to a formal hearing.

The small number of appeals has been interpreted by one study as an indication of satisfaction on the part of the shippers. But another explanation which the Task Force has heard on several occasions is that the appeal mechanism is simply too slow, too cumbersome and too expensive for most companies to undertake. Of the five cases which ran their full course, one took almost seven years, one almost three years and another two years.

In addition to formal appeals, there have been hundreds of informal complaints which have been resolved without formal proceedings. One such case is of particular interest to the province's economy since it involved the transport of western coal for use by Ontario Hydro. When a study commissioned by the Ministry of Transportation and Communications and carried out by a transportation consulting firm, showed that the freight rate quoted by the railways was approximately 35 per cent higher per ton/mile than that charged to Japanese steel interests on the west coast, the Ontario Government intervened. The railways at first protested that there was good reason for the discrepancy, but when Premier William Davis and then Provincial

Treasurer Darcy McKeough publicly criticized them for overcharging by \$60 million annually; they adjusted the rate to a mutually acceptable level. Unfortunately for the shippers, few have such powerful advocates to champion their cause.

### Intra-Rail Competition

Even in parts of the province with two or more railways, competition between them does not necessarily work to the advantage of the shipper. One reason is that, in accordance with a regulation which has remained essentially unchanged since 1907, a shipper located beside one railway may not engage the services of another railway unless either the origin or the final destination of the shipment is within four miles of the point where the two rail lines intersect. As a result, many shippers are left with access to only one railway even though their municipality may be served by both CP and CN.

A further source of aggravation is the railways' reluctance to cooperate with each other in order to ship consignments via the shortest possible route. In spite of shippers' repeated efforts to have the railways compelled to quote joint rates whenever the direct route involves more than one of them, the CTC's position remains that each carrier is entitled to use its own line so long as it can come up with a route which is "reasonable and practical". Though northern Ontario shippers may not believe it is either reasonable or practical to send goods bound for the American mid-west through Toronto, instead of the much shorter route via Fort Frances or Sault Ste. Marie, that is exactly what they are compelled to do – and pay the high transportation costs entailed by this circuitous journey.

On the other hand, there is little or no evidence that competition between the railways results in lower rates or improved service for shippers. Canadian railways are not subject to federal anti-combine legislation and they take full advantage of the right, bestowed on them by the Railway Act, to agree upon and charge identical rates. Under these circumstances, the benefits which the public or the economy derives from competition between the railways are minimal, if indeed they exist at all.

### Branch Lines

Whatever the cost or shortcomings of rail service may be, no community wants to be deprived of it. This becomes abundantly clear every time the railways apply for permission to abandon an unprofitable branch line, only to be met by an indignant outcry from the affected communities and their elected representatives. But opposition notwithstanding, a number of gaps

have opened up in the province's rail network. No longer in existence, for instance, are lines which once linked Cornwall with Ottawa, Orillia with Lindsay, Falding (near Parry Sound) with Whitney at the entrance to Algonquin Park.

These and other abandonments already represent more than 15 per cent of the province's onetime rail network, and that percentage could increase dramatically if the Canadian Transport Commission were to approve those applications for abandonments which have been made or are currently being contemplated. Included among them are CN applications to abandon the 55-mile line between Lindsay and Haliburton (which has already been out of service for two years due to a minor washout left unrepaired) and the line between Listowel and Kincardine, plus a CP application to discontinue service on the line from Walkerton eastward to Saugeen.

It was the latter application which sparked a study by the Ministry of Transportation and Communications to determine the impact of the proposed abandonment on the economy of the Bruce Peninsula and mid-western Ontario region. The study, completed in April, 1978, found that the line was a vital link in the rail network which serves the major industries in the area. Its abandonment, the study concluded, would also substantially delay or prevent the development of the area as a supplier of mineral aggregates. According to current projections, the demand in Ontario for this basic construction material is expected to exceed two billion tons by the end of the century. Reserves in southern Ontario cannot possibly fill this projected demand and Grey County, served by the rail line which CP proposes to abandon, is the most promising alternative source of supply.

A CNR application in December, 1978, to abandon yet another line in the same region, and the railways' indication that six similar applications were in the offing, led to an agreement by the Canadian Transport Commission to suspend all decisions on abandonments until a rationalization study could determine present and future transportation needs of the area. Canadian Pacific, Canadian National and the Ministry of Transportation and Communications are joining forces to conduct the study which is looking into all aspects of the railways' current plant and services in the region, their cost, and the economic and financial implications of rail freight services that might become available within the next 20 years. The study is to be completed and a final report prepared by the end of the year. Just how much influence the Province will have in

the final outcome remains to be seen.

### Tourism

Should a similar study be undertaken for the Algonquin hinterland, the site of another cluster of branch lines and proposed abandonments, its terms of reference would presumably include one of Ontario's most important industries: tourism. In 1979, total tourist expenditures in the province reached an estimated \$6.6 billion, generating \$1.2 billion in taxes and 624,000 man-years of employment. Only manufacturing accounted for more jobs and provincial tax revenues.

Ontario is Canada's single most popular tourist destination, attracting two thirds of visitors from the United States and well over half those from overseas. Travel from the United Kingdom, West Germany, Holland and Japan increased by 25 per cent in 1979, with a further 14 per cent increase projected for 1980. Coincidentally, these are the very countries whose citizens are accustomed to fast and comfortable rail service and use it as a matter of course for recreational purposes.

Unfortunately, Canadian railways are ill-equipped to respond to the visitors' demand for a similar kind of service. As already pointed out (Chapter IV), VIA Rail inherited passenger equipment which is old and operates on roadbeds which are frequently substandard. It also inherited a climate of public opinion which viewed tourists travelling by train almost as eccentrics. In the past, North American visitors to Ontario or Ontario citizens vacationing within the province almost invariably travelled by car or, if the distance warranted it, by air. There was little indication that many of them would use a train unless driven to it by dire necessity. Perhaps that is why, of the 187 escorted package tours listed in VIA Rail's summer 1980 catalogue, only five have Ontario as their destination.

VIA's perception of tourism as a potential source of revenue does, however, appear to be changing. Ontario residents now have a choice of rail package tours to Niagara, the Thousand Islands, Stratford (for the theatre festival), Chatham (for the spring and fall bird migration) and Ottawa. Five hundred packages a week are being sold in the Detroit/Windsor area for week-ends in Toronto, and VIA estimates it could sell many more if it had enough cars to accommodate the passengers. The popularity of this package is all the more surprising since it originates in Windsor, and U.S. travellers have to make their own way by car or taxi across the international border from Detroit to pick up the train.

Elsewhere in the province, the Ontario Northland Railway's Polar

Bear Express from Cochrane to Moosonee has been a popular tourist attraction in the past, but traffic in 1980 dropped by 17 per cent.

Though this was part of a somewhat disappointing tourist season throughout northern Ontario, the fact that the Polar Bear Express leaves Cochrane an hour *before* the arrival of the train from North Bay, so that tourists have to wait 23 hours for the connection, may have had something to do with its disproportionate decline in patronage.

Algoma Central Railway's contribution to northern Ontario's tourist industry is the Agawa Canyon train. Originally part of the railway's regular passenger service, the tour has proved so popular that it was turned into a separate excursion. Even so, Algoma Central's submission to the Task Force described the train as "more a public service than a benefit to the railway."

On balance, it seems that tourist trains, like branch lines, must be judged not by the net revenues or losses they generate, but by their contribution to the province's economy. If that contribution is larger than the cost of providing the service, then the taxpayer is well served. The challenge lies in developing a valid formula for assessing both the costs and the benefits, and deciding who is to pay for what.

### Subsidies

Though the National Transportation Act was designed to make transportation more efficient and therefore less dependent on the public purse, it did specify that each mode should be compensated for services it was required to provide as a public duty. In the case of the railways, this subsidy was to apply to unprofitable branch lines as well as passenger services, amounting to 100 per cent of the railways' actual losses for branch lines, 80 per cent for passenger services. It was left to the Canadian Transport Commission to decide which services were deemed to be in the public interest and should therefore be maintained at the taxpayer's expense.

In 1977, ten years after the National Transportation Act became law, fully ten per cent of the railways' revenues of \$3.54 billion consisted of government payments; passenger services accounted for two-thirds of these subsidies. The amounts paid by the Federal Government to CP and CN are substantially lower now that VIA Rail has assumed responsibility for passenger services; but all this means is that the \$232 million passenger service deficit for 1979 showed up in the financial statements of VIA, rather than of CP or CN. Meanwhile, the two railways are still collecting tens of millions of dollars every year in subsidies for operating unprofitable



branch lines.

In spite of the enormity of these figures, it does not necessarily follow that railways are more heavily subsidized than air or highway carriers. Studies tell different stories, depending upon who commissioned them and which factors were taken into account. To make matters even more difficult, most of the studies are woefully out of date.

The most current figures come from Transport Canada which reports that, in 1978/79, railways received \$547.9 million in direct federal subsidies and payments, compared to \$135.4 million for road transport, \$147.6 million for marine and \$15.6 million for air. But these figures make no allowance for the fact that railways (unlike highway carriers) maintain their own rights-of-way, nor do they include the Federal Government's multi-million dollar expenditures for air terminals and control equipment. Not included either are the provinces' massive road-building budgets, only partly covered by licence fees and fuel taxes; none of the \$135 million spent by the Federal Government on roads went to Ontario.

According to a study undertaken in the early 1970's by Dr. Zis Haritos, the net transportation deficit – i.e. the portion of total costs not recovered from the various users in fees or charges – amounted to \$2.56 billion. Of this total, road transportation (bus, truck and automobile) accounted for 44.6 per cent, the largest portion by far; rail came next with 26 per cent, followed by marine (20 per cent) and air (9 per cent). But if the same findings are used to calculate subsidies as a percentage of total costs, rail emerges as the most subsidized mode, followed by marine, air and road in that order. Haritos, like Transport Canada, does not include the cost of airport expenditures in his calculations.

In terms of passenger miles, Haritos also lists rail as the most heavily subsidized, whereas buses get a clean bill of health as the one transportation mode which does not depend on public handouts. But experts can argue interminably as to the most equitable way to split highway costs among buses, trucks and private automobiles. Also Haritos' passenger mile calculations were based on essentially unprovable assumptions as to occupancy. A car travelling 100 miles from A to B may account for 100 or 500 passenger miles, or something in between; levels of subsidy per passenger mile vary accordingly.

Perhaps all that can be said with certainty is that, in spite of the Federal Government's avowed intention to put transportation on a commercial footing, Canadians pay heavily for their transportation system.

In the case of the railways, the subsidies appear in financial statements and are therefore visible; in the case of air and highway carriers, government support is more difficult to track down, but no less real and substantial.

### Energy

One factor which none of the subsidy studies took into account, presumably because it has only recently emerged as a major consideration, is the rising cost and uncertain supply of petroleum-based fuels.

Approximately half the petroleum consumed in Ontario is used by the fuel hungry transportation sector, and the appetite shows few signs of abating. Though increases in fuel consumption did decline in the early 1970's from the annual rate of 5.2 per cent, the trend has recently been reversed with increases of 4.3 and 5.2 per cent recorded in 1978 and 1979 respectively. Alternate fuels such as methanol or hydrogen may eventually replace petroleum in some instances; but neither is expected to make significant contributions to transportation before the end of the century. For the foreseeable future, therefore, transportation will remain extremely vulnerable to changes in fuel prices and supply.

Judging by the submissions received by the Task Force, there is a widespread assumption that railways are, almost by definition, the most energy efficient transportation mode. This is not necessarily true. Energy consumption depends on many variables including weight, speed and aerodynamic resistance; while freight trains on average achieve 300 ton-miles per gallon of fuel, the figure can vary all the way from 150 ton-miles for a fast piggyback operation to 600 ton-miles or more for a slow unit train of cylindrical tank cars. Similarly, the energy efficiency of trucks ranges from 30 ton-miles per gallon to over 125 ton-miles per gallon.

Nevertheless, it is true that freight trains are anywhere from two and a half to four times more fuel efficient than trucks. The Ministry of Energy estimates that trucks account for 57.3 per cent of all the fuel consumed by intercity freight transport in Ontario, compared to 22.5 per cent for the railways and 20.2 per cent for marine transport.

When it comes to passenger travel, fuel consumption comparisons are again complicated by variables such as load factors and speed. A heavily patronized train running between Toronto and Montreal is almost twice as fuel efficient as a transcontinental train with few passengers and its excess load of dining cars, sleepers and baggage cars. Even the Toronto-Montreal train gets fewer passenger miles per gallon than most buses.

Generally speaking, passenger trains are considerably more fuel efficient than aircraft or the private automobile, particularly if the latter has only one or two occupants. In Ontario, automobiles account for a staggering 86.4 per cent of the fuel consumed in intercity travel; passenger trains consume 1.7 per cent – and even that figure could be reduced substantially if some major lines were electrified.

The effect which fuel efficiency or lack of it can have on the cost of transportation is already evident. With petroleum prices up by approximately 20 per cent within the past year, the air lines have recently applied for their fourth fare increase in 1980. Similarly, the cost of driving a car or operating a truck rises appreciably every time the price of gasoline or diesel fuel goes up. On the other hand, for buses, trains and marine transport, fuel is a relatively small cost component, and while those modes are far from immune to price increases, they are in a much better position than their competitors to absorb the impact.

That impact could be dramatic if prices were permitted to rise towards world levels. A Task Force study estimates, for instance, that a doubling of fuel prices would increase the costs and, presumably, the fares of air lines by 20 to 25 per cent, and the cost of driving by 23 to 42 per cent; rail or bus passengers, on the other hand, would only have to pay marginally higher fares. Substantial cost increases would probably cause a major switch in allegiance among travellers as well as shippers of freight. However, neither the railways alone, nor railways and buses combined are in a position to accommodate such a large increase in traffic.

Even the problems implicit in fuel price increases and their impact on the economy are overshadowed by the uncertainty of supply. Given the volatile political climate in many oil-producing countries and Canada's dependence on oil imports, a fuel shortage is by no means an unlikely contingency. Should such a shortage develop, railways could presumably obtain a sufficient allocation to fill their relatively modest requirements. But Ontario's transportation network, with its heavy reliance on energy intensive road and air transportation modes, would be in serious trouble.

## RAILWAYS AND JOBS



*Automation and new technology will continue to cut into the total number of railway jobs.*

Railways employ approximately 25,000 people in Ontario, or some 23 per cent of the railways' national work force. If the province's share of railway jobs is smaller than its population seems to warrant, it is partly because the CP and CN headquarters in Montreal have a much larger staff than the railways' regional administrative offices in Toronto. Another reason is that Ontario does not have large railway repair shops comparable to the ones in Moncton, Montreal and Winnipeg. Also missing from the Ontario scene is the closely meshed branch line network characteristic of the prairie provinces, and the staff that goes with it.

Nevertheless, the railways are important employers, particularly in northern Ontario where their pay cheques are the only money people in many communities ever see. There is no equivalent anywhere in Canada to CN's transcontinental line between Pembroke and the Manitoba border where, with the exception of the section from North Bay to Sturgeon Falls, the railway is the principal employer in a 1000-mile string of small but long-established communities. Sioux Lookout (population 3,000) and Hornepayne (population 1,800) are among the largest of these towns, where a railway pass is as common a means of identification as a driver's licence is in the south; they are also the focal points for many "remote" communities north of the CN line.

In southern Ontario, on the other hand, railway employment is declining, though at a slower pace than in the 1960's. Stratford, once known as the site of a steam locomotive repair centre, has made a successful transition

to its current and more attractive Shakespearean image. Brockville, Belleville, St. Thomas and Sarnia have also found new industries to provide the jobs which used to be available from the railways. Smith's Falls, once the site of an important marshalling yard, probably counts more retired than active rail employees among its citizens.

Though CN in 1979 reported a marginal increase in its national work force, new technology is bound to continue cutting into the total number of jobs. Automation of yards, of container operations, of rail maintenance and of signalling systems all spell a reduction in employment. The Task Force has heard very little evidence of the featherbedding practices for which the railway unions were at one time notorious; but current conflict between the Brotherhood of Locomotive Engineers and the United Transportation Union on the one hand, and C.P. Rail management on the other, suggests that the issue is far from over. While communities in northern Ontario have fought in the past and will presumably continue to fight technological changes which threaten their principal source of employment, indications are that only a major expansion in railway activity can reverse the long-term trend toward fewer, albeit better paying jobs.

### **Railways as Purchasers of Services and Equipment**

Slightly more than half of Canada's rail equipment manufacturers are located in Ontario. With national sales estimated at \$1.2 to \$2 billion, the railways are clearly a major indirect source of



employment in the province. In addition to the actual purchase of equipment, railways also generate jobs connected with roadbed maintenance, equipment rebuilding and engineering services.

A leading manufacturer of rolling stock is Hawker Siddeley Canada Ltd. whose Canadian Car Division in Thunder Bay designed and produced the double-deck commuter cars used so successfully by GO Transit. Hawker Siddeley, which also produces rail equipment for the export market, employs more than 4,000 people in its rail-related ventures in Ontario and Nova Scotia; sales of railway products accounted for about half the firm's \$540 million net sales in 1979.

Other rolling stock manufacturers include National Steel Car Corporation Ltd., which produces freight cars in its Hamilton plant, and PROCOR Ltd. of Oakville which specializes in the manufacture and lease of tank cars and hopper cars. The Diesel Division of GM Canada produces locomotives in London. Canadian firms which produce track materials – ties, rail and rail fastenings – include Algoma Steel in Sault Ste. Marie and the Steel Company of Canada in Hamilton. Cannon Rail Group in Toronto manufactures automated track maintenance equipment.

All these manufacturers and suppliers have one major complaint: the railway business, they say, is a case of feast or famine, huge orders for a year or two followed by slumps of unpredictable duration and crippling magnitude. Only large and diversified companies can weather the impact of the fluctuations which seem to be endemic to the industry.

Nevertheless, Ontario-based companies produce equipment which has proved highly acceptable to Canadian as well as foreign railways. GM Canada locomotives can be found in Mexico, Yugoslavia, Egypt, Algeria, New Zealand, Togo and Pakistan. Hawker Siddeley has sold cars in Mexico and in Boston; and according to one newspaper report, Premier Davis was in Detroit last July not so much to observe the Republican convention as to extoll the virtues of Hawker Siddeley's Ontario-built transit vehicles.

Canadian railways cannot claim credit for the export sales of their suppliers. But it is a safe bet that those sales would not have materialized had Canada's railways not provided the primary market and the impetus for the development of the products.

## RAILWAYS AND THE COMMUNITY



*More than 30 per cent of all level crossing accidents in Canada happen in Ontario; there were 257 such accidents in 1979.*

Many communities have mixed feelings about railways. They value the service railways provide to industry and the travelling public, and any attempt to discontinue or curtail that service invariably runs into stiff opposition; but at the same time, they resent bitterly some of the social and environmental effects which the railways have on their lifestyle. Generally speaking, these adverse effects can be divided into two categories: those which concern land use, property values, the development of the community, and the environmental impact of railways on neighbourhoods; and those which concern the safety of citizens.

### Safety

Millions of people in North America and overseas had never heard of Mississauga before November 10, 1979 – the day CP Rail's Train 54 jumped the tracks and one of two dozen derailed cars began leaking chlorine. By the time Mississauga's 240,000 inhabitants had been evacuated, the city's name was firmly identified with the most publicized and potentially most lethal rail accident ever to occur in Canada. The orderliness and control of the entire procedure attracted

worldwide interest.

The derailment is still being investigated by Mr. Justice Samuel Grange, and a number of court actions which have been launched will eventually determine who or what was to blame; but inasmuch as nobody died as a result of the accident, some observers perceive it as a blessing in disguise, a timely warning that rail operations entail serious risks for the communities they serve.

The danger received some public recognition ten years ago when three rail accidents within nine days were, according to the Canadian Transport Commission's Railway Transport Committee, "the culmination of a long series of derailments, collisions and other mishaps on Canada's railways that had been multiplying at an alarming rate." The CTC launched an inquiry which concluded, after three years, that there was a need for "action more drastic than its (CTC's) prevailing safety program entailed." The report recommended improvements in 16 areas including signal systems, traffic control, tracks and roadbed, rolling stock and accident investigations.

But having handed down its recommendations, the CTC, which has the

responsibility for safety, did little or nothing to insist on their implementation. One of the defects identified by the 1970 inquiry was the failure to install sufficient hot box detectors – infra-red scanners designed to detect and report overheated journal boxes. It has been suggested that the Mississauga derailment may have been caused by an overheated journal box.

Another recommendation was that the railways convert from friction to roller wheel bearings; but the cars involved in the Mississauga accident were equipped with the same friction bearings which had been found wanting ten years earlier. When Ontario Attorney-General Roy McMurtry recently accused the railways and the Canadian Transport Commission of showing "an appalling lack of concern for public safety," he was echoing a charge made frequently by union leaders. According to one witness testifying last June before the federal transport committee, rail crews often don't even know that dangerous materials are on board their trains. Said Edward Abbot, executive secretary of the Canadian Railway Labour Association: "The Mississauga derailment was entirely predictable. In light of the findings of the CTC's 1970 inquiry, the only questions left unanswered, if strong regulatory action was not taken by the CTC, were simply when and where a serious derailment would occur, and how bad it would be."

Rail accidents can be divided into three general categories: derailments, collisions and crossing accidents. According to CTC terminology, derailments and collisions are defined as such only if they occur on main lines and cause material damage to rail equipment in excess of \$750, or if they involve dangerous goods and/or result in personal injury. An accident in a switching yard or on a spur or siding would not qualify as a derailment or collision, regardless of the amount of damage it caused.

### **Derailments**

Even within the CTC's definition, derailments account for a growing number of rail accidents. The upward trend began in 1964 when the number of derailments shot up within one year from 120 to 221, though traffic remained virtually unchanged. Today, derailments are twice as frequent (per unit of traffic) as they were in 1960. Ontario is the site of more than its fair share of these accidents. With 28.8 per cent of the country's train-miles, the province in 1979 had 133 derailments, or 36.1 per cent of the national total (368). Between 1975 and 1979, derailments in Ontario increased by almost 25 per cent even though their number declined slightly in Canada as a whole; and with major accidents

such as the derailment and explosion of an oil tanker in London in June, and a derailment involving a shipment of explosive liquid butane at Eberts just outside Chatham in August, it does not look as though 1980 will be any better.

One of the major causes of derailments is the condition of the track. There is considerable evidence that track maintenance and monitoring standards in Ontario are less than adequate. This situation, combined with the damage inflicted by increasingly heavy car loads, is resulting in an incidence of serious accidents which the railways, the CTC and the Province should all consider unacceptable.

### **Collisions**

While less frequent than derailments, collisions too have increased substantially at the national level. In 1979, their number jumped to 76 from 42 the previous year. Within the same year, Ontario had an increase from 12 to 21, although these figures as reflected in the national total actually show a decrease from 28.6 per cent to 27.6 per cent.

### **Crossing Accidents**

Level crossing accidents are the only ones which have shown an encouraging decline both in Ontario and in the country as a whole. In Ontario, the number of such accidents dropped from 328 in 1975 to 257 in 1979, and the province's share of the national total declined from 33.4 per cent to 31.0 per cent during the same period. But in spite of the favourable trend, Ontario's 257 level crossing accidents in 1979 leave no room for complacency.

The most effective way of eliminating such accidents is to construct grade separations. In 1974, the Railway Relocation and Crossing Act listed conditions under which the Federal Government was prepared to subsidize the construction of grade separations. In order to qualify for the federal grant, the project would have to be approved by the CTC which, in turn, would require evidence that the Provincial Government and all municipalities concerned were in agreement with it.

But in 1977, the Federal Government changed the rules of the game by establishing the Urban Transportation Assistance Program. Under this program, a total of \$16.5 million per year would be available to Ontario for five years to cover not only grade separations but also relocation studies and their implementation plus urban transportation assistance. Given the fact that it costs \$1 to \$3 million to build one grade separation, (and there are approximately 250 grade crossings in the Ontario sector of the Toronto-Montreal corridor), the Province decided to put all the UTAP money



into this one high priority activity. Even so, the program had to be restricted to some 15 projects a year, and there is the further threat of a total withdrawal of Federal Government funding. Should this threat materialize, some urgent projects will have to remain on the waiting list.

Submissions to the Task Force indicate that grade separations are a major concern to many municipalities and regions. Oakville foresees a need for six grade separations in addition to the one now under construction; St. Thomas reports "32 railroad crossings on our County Road System, but no over or underpasses"; in Scarborough within Metro Toronto, 19 crossings remain on a capital works priority list; in London, two of the five high priority crossings are on main thoroughfares, where traffic has sometimes been brought to a halt for 15 minutes by passing trains; and according to a North Bay study, the cost of new grade separations and associated work is estimated at \$11 million – \$3 million more than it would cost to relocate the railway.

### Legislation

The Federal Government's Bill C-18, designed to regulate the transport of dangerous goods, has been passed by the Commons and is expected to become law before the end of the year. It sets safety standards for the shipment of such substances as sulphuric acid, liquid propane, arsenic, chlorine, pesticides and other chemicals.

On the provincial level, the Environmental Assessment Act and Environmental Protection Act in their present form apply to GO Transit – but not to CP and CN which are under federal jurisdiction. An amendment to the EPA is due to be implemented later this year and could make the railways liable for damage caused by spills of hazardous materials.

But when it comes to accidents in general, many observers believe that the need is not so much for new legislation as for enforcement of existing rules and regulations. As the agency charged with setting safety standards and making sure that they are observed, the CTC might start out by dusting off the report of its own 1970 inquiry and making sure that its recommendations are implemented. Relying on the railways to regulate themselves in this important area does not appear to be a satisfactory solution.

Additional recommendations will undoubtedly emerge from the Mississauga inquiry. Mr. Justice Samuel Grange has already hinted what some of them may be: a ban on placing cars containing explosives next to cars carrying noxious freight; speed restrictions, particularly in heavily populated areas; shorter trains and

safer routes; clearer labelling of freight and tank cars. No legislation should be needed to implement any of these measures, nor to improve inspection and maintenance procedures for track as well as equipment. According to Charles Turner, Member of Parliament for London East, the CTC employs a total of 13 equipment inspectors in all of Canada – hardly a reassuring number.

The Canadian Association of Chiefs of Police suggested to the Mississauga inquiry that computer printouts detailing the contents of freight trains should be available to police and fire fighters in case of emergencies. When members of the Task Force visited the United Kingdom, they found that such a system is already in place. They also found a simple but highly effective set of symbols for labelling the contents of cars, and posters with reproductions of these symbols prominently displayed in areas where railway personnel congregate. Miniature plastic replicas of the poster fit inside the yardmen's breast pockets. In the United Kingdom, such safety measures are considered a matter of course: "Doesn't everybody do this?" they asked. The answer, unfortunately, was: "No."

### Land Use

Ideally, land use planning and transportation planning should work hand in hand in pursuit of overriding municipal goals. This actually is the case as far as the road and highway systems are concerned. But because railways are under federal jurisdiction, they have lived in a world apart from that of municipal planners and their provincial mentors. The only exception were municipalities such as Sioux Lookout, where CN was the one major employer. The railways, for their part, saw no reason to worry about neighbourhoods and communities which, more often than not, had developed long after the railways had established their claim to rights-of-way and to physical facilities in the area.

The CP line in London is a case in point. Built in 1887 and located on the outskirts, the line played an important part in the city's early development. But as London grew, it spread around the tracks and the railways' freight yards. With people complaining about noise and vibration, the city now would like CP to switch its traffic to the CN corridor so that both its track and its freight yards could be removed.

In recent years, the problem has been aggravated in many communities by the shortage of urban land available for development. In the words of a brief from the Borough of Scarborough, "the abutting property is too valuable to be left vacant." In Metropolitan Toronto, the St. Lawrence neighbourhood consists of multi-family homes

built on underutilized industrial land right beside an elevated rail line. In the Region of York, residential developments are in place or under construction for miles along the CN Maple line.

The railways have tried to argue against such obvious land use conflicts. As the original occupants, they objected to developments which might restrict their freedom to operate an efficient transportation system. They have suggested that residential dwellings should be at least 250 feet from the rail line because of vibration, and up to 1,000 feet because of noise. But in the absence of firm provincial guidelines, developers often managed to persuade municipalities to ignore or modify such advice.

The Mississauga subdivision, south of Bramport for instance, was approved even though some of its 800 homes are within 125 feet of the CN rail line. The railway argued in vain that the noise and vibration from 50 to 60 trains per day would lead to complaints from the residents. The only buffering measure was a five foot wooden fence running along the back of the residential lots; needless to say, it has proved ineffective. Incredibly, the new Mississauga Official Plan is even now proposing additional residential housing beside the CP line, within sight of the infamous 1979 derailment.

### **The Need for Planning Guidelines**

Even though the railways are under federal jurisdiction, the Province does exercise authority over land use planning through the Planning Act. the draft Planning Act now under consideration does not specifically mention railways; but it does list a number of "concerns" which could be interpreted as suggesting a provincial role in the relationship between railways and municipalities. Included among them are "the protection of the natural environment and the management of natural resources", "the resolution of planning conflicts between municipalities and other public bodies", and "the protection of the financial and economic well-being of the province and its municipalities."

Once the Act is passed, the Province will be in a better position to provide municipalities with definite planning guidelines with regard to railways. Submissions received by the Task Force clearly indicate that such guidelines are wanted and needed. Says N.C. Marshall, Director of Planning for Pickering: "Attempts have been made to establish satisfactory land use planning guidelines to ensure safe development in the vicinity of rail lines. Research revealed that no such planning standards have been prepared by the railways, or the Provincial or Federal governments."

The same view is stated loud and clear in the submission from Oakville. As the brief points out, "sizeable quantities of housing continue to be built along this (Lakeshore) corridor" in spite of warnings from the Ministry of the Environment and the railways. Aside from the environmental consequences of such incompatible development, serious economic problems may develop should expansion of the rail corridor be jeopardized by complaints from people living beside the rail line. According to the brief, "the Province and the rail companies should take an even stronger stand with respect to residential development along rail corridors."

Criteria now being developed under the auspices of the Ministry of Housing for railway noise and vibration will help the Province establish standards for the railways to abide by.

It should be said that, in spite of complaints about noise and vibration, the railways' impact on the environment is considerably more benign than that of other transportation modes. Scarborough may chafe at the absence of weed control along railway tracks ("rights-of-way provide an ideal source for identification training for new inspectors because most varieties of weeds are available"), but the fact remains that routine rail operations have a minimal effect on the air we breathe and none on the water we drink. To quote the submission from the City of Orillia Economic Development Commission, "the environmental effects of railroad locomotives hauling perhaps the equivalent of 50 truck trailer loads of goods is much less severe than the effluent from the 50 trucks."

Since they are under federal jurisdiction, CP and CN could technically ignore provisions of the Planning Act; but the railways have demonstrated in a number of instances that they would welcome measures designed to resolve a problem which, in the final analysis, is as harmful to them as it is to the affected municipalities.

Indeed, there is reason to believe that all it would take to resolve some conflicts is an improvement in communications between the parties concerned. This is another area where the Province could play a useful role. Smaller municipalities in particular perceive railway management as remote, arrogant and unapproachable; an intermediary might be able to dispel that image and bridge the communications gap.

### **Rail Relocation**

Theoretically, relocation or re-routing seems to be the answer to most of the urban problems associated with railways. Over and over, the Mississauga Railway Accident Inquiry heard suggestions that special routes bypassing

population centres should be established for the transport of dangerous materials. Similarly, relocation of rail lines is seen by some municipalities as the best way to protect land values, eliminate potentially dangerous level crossings and rid neighbourhoods of the environmental impact of railways.

The concept is not new. As early as 1960, the Province launched feasibility studies that examined railway relocation and in 1974, the Federal Government's Railway Relocation and Crossing Act allocated funds for relocation studies. Ottawa would pay up to 50 per cent of the cost, the Province 37½ per cent and the participating municipality 12½ per cent. Twenty-one Ontario municipalities wanted to have such studies conducted, but the Province decided that five pilot projects would be enough of an expense to start with. Niagara Falls, Sudbury, North Bay, Brantford and St. Thomas were selected, though St. Thomas subsequently decided to withdraw.

The 1977 Urban Transportation Assistance Program (UTAP) (see page 48), under which an annual maximum of \$16.5 million would be available to Ontario to cover a number of activities, to all intents and purposes aborted any further railway relocation studies, at least for the time being. Given the tight ceiling on federal funds, Ontario has decided to invest all the money into grade separations which rate a much higher priority than relocation. Of the five studies launched to date, only the one in North Bay has been completed and, at an estimated implementation cost of \$8 million, it seems that further action will have to await a more favourable economic climate.

Besides, the railways are far from enthusiastic about relocation projects. As they see it, such moves might affect their ability to compete for available traffic. Relocation, they say, might merely transfer railway related problems to another area. In the late 1950's when CP decided to move its classification yard out of downtown Toronto to Agincourt in the Borough of Scarborough, the site was rural and designated as industrial in the Borough's Official Plan. But soon after the yard was built, pressure began for development of the adjoining land and today, an estimated 100,000 people live close enough to complain about yard noise and odour, and to demand restrictions on railway operations.

### Rationalization

But where relocation may be impractical or even undesirable for the time being, rationalization is not. Rationalization implies a joint effort on the part of railways and municipalities to achieve maximum efficiency by consolidating duplicate services, cutting down on maintenance

costs and eliminating underutilized or outmoded facilities. The situation in Chatham is a case in point. The city is traversed by parallel CP and CN lines running east to west less than half a mile apart. Since the CP trains disrupt downtown traffic and create noise and vibration problems, Chatham would like them switched to the CN corridor east of the city and back to their own track in the west. This would eliminate a number of level crossings, improve traffic flow and open up for development a potentially valuable part of the city, without depriving industry of access to both railways.

Abandoned rights-of-way provide another opportunity for rationalization. As pointed out in a number of submissions, such vacant corridors could be used for rapid transit lines, or as walkways, linear parks, bicycle paths and snowmobile trails. Vacant land around a railway station might serve as an excellent site for an intermodal terminal. Where such combined terminals exist – in London, for instance, or in Kapuskasing – they contribute a great deal to the convenience of travellers and enhance the appeal of public transportation. But Chatham's attempts to encourage its intercity bus terminal to move to a downtown "Transpo Centre" which would also serve rail passengers and municipal bus riders have run up against a distinct lack of enthusiasm on the part of both VIA Rail and Greyhound Bus Lines. Competitive pressures, it seems, are more powerful motivators than passenger convenience.

Whatever happens to unused rights-of-way, there is a widespread consensus that the public interest would be ill served if they were allowed to fall victim to municipal sprawl. Bearing in mind the cost of oil-derived fuels and Ontario's need for an efficient transportation network, rail service along those lines may some day have to be revived. The Province might therefore consider acquiring abandoned rights-of-way, presumably at little cost, and preserving them for possible future use.

Opportunities for rationalization do exist. What is needed is the imagination, the initiative and, in most instances, the money to implement them.





## THE WAY TO GO



*Fuel price increases have revolutionized the economics of transportation.*

An interim report is not the place for firm conclusions or recommendations. After nine months of hearings, discussions and submissions from dozens of municipalities and organizations, the Ontario Task Force on Provincial Rail Policy is more conscious than ever of the complexity of its task.

Everybody agrees that Ontario needs an efficient transportation system where each mode, including railways, performs the functions best suited to its capabilities. But consensus ends when it comes to translating the theory into concrete measures.

For every shipper who complains about high freight rates, there is a free enterprise advocate who opposes any interference in the railways' business; for every municipality which fights the abandonment of a branch line, there is a taxpayer who resents subsidizing an unprofitable service; for every person who wants to divert traffic from passenger cars and aircraft to more energy efficient transportation modes, there is a champion of the automobile and aircraft industries to point out their importance to the provincial economy; and for every critic who charges trains with disrupting neighbourhoods by going too fast, there is another who complains that they don't get him to

his destination fast enough.

Obviously, there are no easy answers or solutions. Nevertheless, the Task Force has identified a number of issues which are particularly important to this Province, and directions which are worth pursuing.

### **Railways Are Not a Business Like Any Other**

Deregulation has enabled the railways to improve their financial position, invest in rolling stock and streamline a number of their operations. The resulting improvement in efficiency, certainly where the transport of freight is concerned, is a welcome development. A return to regulation would be a retrograde development. At a time when our neighbours to the south are still trying to come to grips with deregulation, Canadians have reason to be pleased with the thrust and effect of their own legislation.

That is not to say that the legislation is perfect, or that its implementation leaves nothing to be desired. In one respect, deregulation does not go far enough. The Crow's Nest Pass rates were archaic even before the National Transportation Act was drafted, and with the growth of inflation, they have been getting more so ever since. Speaking on behalf of the Government

of Ontario, Premier Leslie Frost warned the MacPherson Commission 20 years ago that these artificially low rates were resulting in cross-subsidization and imposing an unfair burden on captive shippers. In the words of the Province's 1960 brief, "A policy which penalizes progress and which seeks by overcharging on the movement of goods on some lines to compensate for loss on others will in the end prove self-defeating."

That argument is as valid today as it was then. There is admittedly no guarantee that, if the railways were relieved of their obligation to haul grain at 1897 rates, they would pass the savings on to their customers; but they might invest the multi-million dollar savings in new rolling stock, an improved roadbed or some sorely needed research, to the ultimate benefit of their customers and the economy.

On the other hand, the Task Force is deeply concerned by indications of excessive freight rates charged to captive shippers, sometimes to the detriment of the Province's economic objectives. The railways are entitled to a fair return for their services; but it is questionable whether, by enhancing their own profitability beyond reasonable bounds, they should be allowed to threaten the viability of Ontario's vital industries.

Such a policy might be appropriate for producers of breakfast cereals or for service industries which are subject to all the forces of a market economy. But railways are not a business like any other. They provide a service which is essential and, in some ways, unique. They serve industries which must remain competitive if they are to continue contributing to Canada's balance of payments. They operate on rights-of-way which were given to them by the people of Canada on the understanding that they would treat them not as their private property, but as a trust.

The appeal mechanism which now exists to safeguard captive shippers against exploitation is inadequate, partly because of the difficulty of proving "captivity", partly because of the time and cost involved in the process. It should not be beyond the ingenuity of the Canadian Transport Commission to devise a simpler, more effective appeal procedure.

Similarly, branch lines should not be abandoned without an examination of their present and future impact on the economy of the region. The Task Force is well aware of the fact that, in a province as vast as Ontario, it is impossible to provide every community with a choice of transportation modes; in some instances, demands for rail service may be based on unrealistic expectations. On the other hand, rail

transportation is too important a service to be allowed to deteriorate in response to local or short-term considerations.

An unprofitable branch line may be a bargain compared to the cost of widening a road, and its abandonment would make no economic sense if it were to put out of business a number of successful industries. The planned development of Grey County in the Bruce Peninsula as a supplier of aggregates is a case in point; abandonment of the CP Walkerton Subdivision line would almost certainly spell the end of those plans.

The rationalization study now underway in the Bruce Peninsula and mid-western Ontario region is a most welcome development. For the first time, the Provincial Government has the opportunity to join the railways in analysing the transportation needs of an entire region, and to take the steps it considers appropriate on the basis of the information provided by that analysis.

### **The Energy Imperative**

Increases in the price of petroleum-based fuels, coupled with questions of availability, have revolutionized the economics of transportation. Even critics who, a few years ago, were prepared to relegate all but a few trains to museums and history books, now concede that energy considerations have rendered most of their calculations obsolete.

The evidence is clear: for reasons of cost as well as safety of supply, the amount of fuel now being burned by trucks, automobiles and aircraft is unacceptable. Ways will have to be found to divert at least some traffic away from these energy-intensive transportation modes.

In the case of freight, indications are that this is already beginning to happen. According to a number of submissions received by the Task Force, some shippers are eyeing railways as an alternative to trucking, while others have switched to piggyback. This trend can be expected to intensify as the cost of fuel continues to rise. Governments at various levels could help the railways plan ahead so that they will have the equipment and the infrastructure to accommodate the projected increase in traffic. Lack of such planning with regard to massive coal shipments has recently generated a chain reaction of problems in the United States.

But it will take more than market forces and advance planning for large numbers of Ontario citizens to trade voluntarily the convenience of their automobiles or the speed of aircraft for rail travel. Though the cost of driving and flying has had some impact on travel patterns, it seems clear that,



barring a national emergency, a sizeable switch in allegiance could occur only if trains were to become much faster, convenient and more comfortable than they are now.

The advent of the LRC will help, but old rolling stock is only part of the problem. In order for Canadians to have the kind of passenger trains available in Europe and Japan, the railways need a much better roadbed, better signalling systems, more grade separations to replace level crossings and, last but by no means least, a more positive attitude on the part of the railways toward their passenger services.

Unless these conditions are met, neither the LRC nor any other type of train will be able to achieve substantially higher speeds or greater comfort than the Turbo, and people will continue to fly or drive.

### Is Electrification the Answer?

Electrification is one way of attracting drivers and air passengers to rail travel. Most of the world's fast passenger trains are electrified. Even British Rail, which has enjoyed unprecedented success with its diesel-powered, high-speed trains, has indicated a desire to shift to fully electrified operations for its mainline network. The next generation of European rolling stock, such as Britain's Advanced Passenger Train (APT) and the French National Railways' TGV, has been designed for use on electrified lines with maximum speeds of 155 to 160 miles per hour.

Japan's famous Shinkansen *Bullet Train* is generally considered the finest and the only profitable passenger service in the world; and Japan is busy electrifying many secondary and feeder lines. Even the Soviet Union, whose climatic conditions and distances most closely approximate Canada's, has electrified a sizeable portion of its rail network.

Canadian railways have until recently been adamantly opposed to electrification. It has been argued that conditions in Canada are completely different from those in Europe and Japan, that the enormous expenditures involved in electrification would not be justified in a country with such a low population density and such an intensive addiction to the automobile.

Cost figures vary depending on their source and the characteristics of the line under discussion, but an analysis by the Task Force staff, supported by figures from the Canadian Institute of Guided Ground Transport, suggests that \$246,000 to \$500,000 per mile is a fair estimate. While these are formidable figures, they should be weighed against the much lower operating costs of electrified trains, their greater manoeuvrability and, in Ontario, the fact that a plentiful source of energy would be substituted for one

which is scarce and increasingly expensive.

The most potent argument in favour of electrification is not the fuel it saves on the rails, but the gasoline savings that would occur if motorists decided to travel by train. Even time-conscious business executives might choose to spend two-and-a-half hours on a train between downtown Toronto and Montreal rather than make their way to Malton, go through check-in formalities, fly to Dorval (or Mirabel) and then proceed by taxi to downtown Montreal.

GO Transit is an obvious candidate for electrification, providing a cost sharing formula could be developed with the railways which use the same track. The Task Force believes this is a course well worth exploring.

### Is Lighter Better?

A major reason why rail passenger services in Canada are generally slow and uncomfortable is that they run on a track which is constantly pounded by heavy freight trains. For years, both CP and CN have been trying to cut costs by acquiring heavier freight cars and combining them into longer trains. According to conventional North American wisdom, this is the most cost effective way to run a railroad. The fact that the track cannot stand up to such abuse and that passengers riding over the same track are therefore subjected to constant vibration is considered an unfortunate but unavoidable by-product of the operation.

The Task Force was told repeatedly that it is impossible to run freight trains and high speed passenger trains on the same track. Yet that is exactly what the British, the Germans and the French do, without apparent difficulty. The secret of their success lies in the weight limits which they impose on their freight cars and locomotives. European freight trains are also invariably shorter than North American ones, and with few exceptions, they receive a lower order of priority in the scheduling process than passenger trains; in Canada and the U.S., it is the other way round.

It can be argued that the freight orientation of Canadian railways makes sense, since freight accounts for more than 80 per cent of their revenues. But even in strictly commercial terms, the Task Force has seen convincing evidence that long-term maintenance savings would outweigh short-term revenue losses if the railways were to reduce the weight of their freight trains. Safety is yet another consideration, though no government has yet spoken up against the potential hazards posed by a 100-ton projectile.

Certainly, the introduction of high speed passenger trains would have to be combined either with the reduction

of freight loads to a maximum of 80 tons, or with the establishment of a dedicated passenger track.

### **CP and CN: Competitors or Allies?**

In theory, access to more than one railway should provide shippers with a choice of carriers who, in the process of competing for available business, enhance their efficiency and lower their prices. In practice, it does not necessarily work that way.

Indeed, there are instances where rivalry between the railways, far from being an advantage, imposes an undue burden on the shipper. The 4-mile "interswitching" limit (see page 41) and each railway's refusal to use a competitor's line even though it may be shorter than its own, both spell needlessly high transportation costs for the customer. It is impossible, for instance, to ship from Toronto to Vancouver via CN part of the way and CP the rest, even though this would chop 100 miles off the shortest route either railway can offer. Why should shippers not have access to any route, regardless of the ownership of the right-of-way?

On the other hand, the lower prices which should be a by-product of competition have failed to materialize for the simple reason that the law allows CP and CN to set their rates jointly behind closed doors. Under these circumstances, it seems that shippers pay the penalties of intra-rail competition without reaping the potential benefits.

Perhaps the time has come to dust off a suggestion made 45 years ago by E.W. Beatty, Chairman of the Board and President of Canadian Pacific. Beatty argued before the 1935 Royal Commission that, if the two railways were amalgamated, "the more favourably situated lines, the better facilities and equipment of the two companies would be available to carry out the combined operation in the most efficient manner and at the least expense...In every case where the two companies are performing similar services, if either company is more advantageously placed, that advantage would be secured for the operation of the unified property. Gradually, duplication in facilities would disappear with resultant decrease in maintenance expense."

One advantage not foreseen by Beatty is the relief which amalgamation of some lines would bring to communities which suffer the environmental impact of several rail lines, and to citizens whose tax money goes into the building of multi-million dollar grade separations. Several submissions to the Task Force mentioned the large amounts municipalities could save and the neighbourhoods they could develop if two rail lines providing

duplicate services were to be combined into one.

Such an amalgamation would not constitute a monopoly. Leaving aside their diversified operations, CP and CN are not in the railway business; they are in the transportation business, and they have plenty of competitors on the highways, on waterways and in the air. It seems plausible to assume that, by eliminating duplicate services and ancient rivalries, they could become more efficient and competitive with other modes to their own advantage and that of their customers. Alternatively, railways should be subject to competition legislation, so that shippers might benefit from lower prices.

Either they are competing with each other or they are not; there is no apparent reason why the railways should have it both ways.

### **GO Transit Deserves a Better Deal**

Should GO Transit, owned by the people of Ontario, be treated like a captive customer by a railway which belongs to the people of Canada? Judging by the latest round of negotiations between TATO and Canadian National (see Chapter VI), that is exactly what is happening. Though CN operates "intercity" passenger trains at cost for VIA Rail, it drives a hard bargain with GO Transit whose enormous investment in the commuter system precludes any effective bargaining.

The Task Force believes this policy is discriminatory and inconsistent with a spirit of cooperation between two levels of government. Even from a strictly federal point of view, an efficient commuter system for a city the size of Toronto is in the public interest at least as much as a VIA regional passenger service patronized by smaller numbers of people outside the metropolitan area. Tens of thousands of people who use GO trains would otherwise be commuting by car, polluting the atmosphere and putting an additional strain on the country's diminishing oil reserves. GO Transit may well be the only commuter service in the world which is not subsidized by the central government; the least it can expect is that it should not be penalized for its success.

Particularly questionable is the insistence on the part of CN that GO Transit and, by implication, the people of Ontario should pay for the use (over and above maintenance costs) of rights-of-way which the people of Canada gave free of charge to CN and its constituent railways. Does VIA Rail face similar demands when negotiating contracts for passenger services? CN is entitled to fair compensation for the service it provides to GO transit; but it should not be allowed to charge what the traffic will bear for a service which

happens to operate under the jurisdiction of another level of government.

### **The Role of the Provincial Government**

Transportation consists of many components, some under federal, others under provincial jurisdiction. But to the extent that transportation is a vital part of the economy, all its components are interrelated and therefore of concern to the Government of Ontario.

There is a need for government involvement in a transportation policy which will ensure service to parts of the province which might otherwise be at a disadvantage. It is also conceivable that a need might arise for provincial involvement in a development which is of overriding importance to the economy of the Province. A precedent for such an action was set recently in connection with a rail line to be built for coal shipments out of northern British Columbia.

Every one of the issues highlighted in this Chapter raises questions of concern to Ontario: freight rates charged to industrial shippers, the effect of branch line abandonments, the need to conserve energy, increased safety, the "captivity" of GO Transit. All these issues, and a number of others discussed in this Interim Report, affect the economy of the Province and the well being of its citizens. It is obvious that the Provincial Government has a role to play in resolving them.

Specific recommendations to implement the Province's involvement in railway policy will be spelled out in the Task Force's Final Report. They will outline ways for the Province to:

1. Safeguard the public interest by ensuring the continuing availability of vital rail services at appropriate service levels.
2. Act as a catalyst to encourage and help implement new rail services or improvements that are in the public interest and could not be implemented by the private sector alone; services in the interest of reducing environmental disruption or of conserving energy are in this category.
3. Act as spokesman and intervene on behalf of the users and operators of rail services and assist them in their negotiations if the public interest is at stake.
4. Ensure that service levels to the public are maintained and not prejudiced as a result of reluctance by governments or by the railways to expand facilities or because of a system that indirectly rewards poor service.
5. Encourage the municipalities to indicate the rail services they perceive as important to their communities with a view to request-

ing the Province to negotiate with the appropriate authorities for new, reinstated or supplementary rail services.





## ONTARIO TASK FORCE ON PROVINCIAL RAIL POLICY

## TERMS OF REFERENCE

**Introduction**

There is a need to develop a Provincial perspective to rail transportation to ensure that the Government of Ontario implement in the 1980's a transportation plan which will provide for the needs of the Province as we prepare to enter the Twenty-First century. A number of critical issues will be facing the Province, such as the potential need to develop alternative energy sources with the knowledge that abundant electrical energy exists for transportation purposes in Ontario.

It is intended that an Ontario Rail Policy can assist in the development and be used as a basis for considering transportation system improvements. For the purposes of this study, the question of jurisdiction is seen to be secondary to the development of an Ontario rail transport policy tuned to the issues of the 1980's.

The Task Force's approach will therefore be extremely broad ensuring that all possible concepts for a Provincial rail transport policy are thoroughly explored. Within this context, both passenger and freight transport will be reviewed with concern for commuter rail, inter-city rail, and the improvement of track and other equipment.

**Task Force**

This study will take the form of a task force chaired by Margaret Scrivener, (MPP – St. David). It is recognized that two other rail-related reviews are being conducted by the Ministry of Transportation and Communications:

- a) the Review of the Roles and Responsibilities of the Toronto Area Transit Operating Authority
- b) the study looking at the potential for electrification of parts of the GO Transit service.

The Task Force will be considering appropriate information from these initiatives and other ongoing studies, some of which it will itself develop.

**Composition of Task Force**

The Task Force will include Deputy Ministers whose responsibilities are in line with the review, together with specialists possessing particular knowledge and experience. M.T.C. will provide full-time support staff, including a coordinator who will be working at the Task Force headquarters.

**Timing of the Task Force**

The immediate objective is to provide the Minister of Transportation and Communications with a written interim report within nine months. A final report will be prepared. Its conclusion and recommendations will also be directed to the Minister of Transportation and Communications.





# GLOSSARY OF TERMS

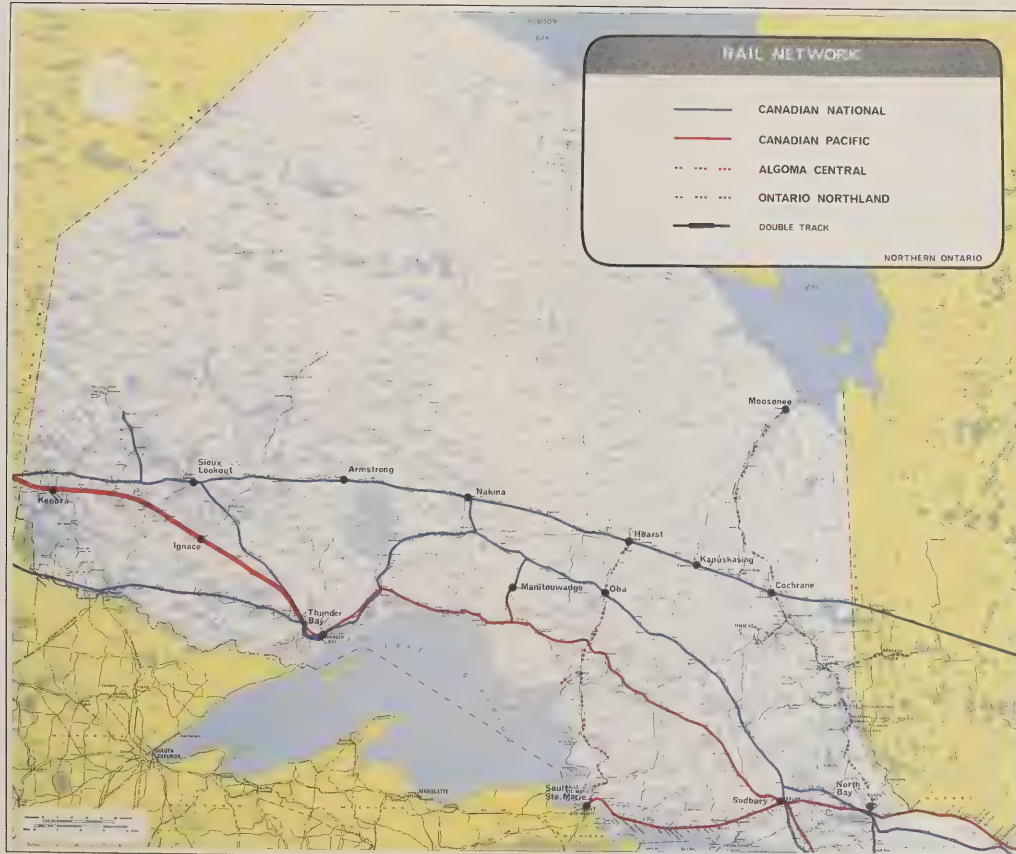
<b>Abandonment:</b>	The discontinuance of operation of a railway line if approved by the Canadian Transport Commission following a public hearing process.
<b>ABS:</b>	(Automatic Block Signalling System): A signalling system in which track-side or in-cab signal indicators are activated automatically by the presence of a train in the length of track governed by the signals.
<b>ATC:</b>	(Automatic Train Control): An extension of in-cab signalling in which the locomotive automatically responds to reduced speed requirements or is automatically stopped if the engineman does not respond.
<b>Axle load:</b>	The weight of vehicle and cargo carried by a single axle of a rail vehicle.
<b>Ballast:</b>	Free draining crushed stone used to provide a bed for railway track and ties.
<b>Block:</b>	A length of track to which entrance is governed by wayside or in-cab signal indicators.
<b>Branch line:</b>	A minor line acting as a feeder to a main trunk line.
<b>Budd car:</b>	A trade name referring to a self-propelled rail diesel passenger car. (R.D.C.)
<b>Classification yard:</b>	A railway yard of multiple tracks where sorting or rail freight cars is done before dispatching trains to their different destinations.
<b>Container:</b>	A standardized large metal box, usually the size of a road transport trailer which is used to transport commodities by ship, rail and road transport and can be conveniently loaded from one mode to another.
<b>Corridor:</b>	A path of substantial traffic movement between cities usually containing several transportation modes. "The Corridor" is commonly used to describe the Quebec City to Windsor Corridor.
<b>Coupling:</b>	The mechanical device by which two rail cars or other railway rolling stock are connected.
<b>Crow's Nest Pass Agreement:</b>	Special low freight rates imposed on the railways by the Federal government in 1897 for the shipment of grain and used to financially assist grain shippers.
<b>CTC:</b>	(Centralized Traffic Control): A system in which a dispatcher can actuate powered track switches and control all train movements and routings from a remote central control console.
<b>Diesel-Electric:</b>	The motive power of railway rolling stock which uses a diesel engine to drive electric generators which in turn drive electric motors geared to the driving wheels of the locomotive.
<b>Friction Bearings:</b>	Wheel bearings on railway rolling stock which are usually bronze and require frequent application of oil lubricant.
<b>H.S.T.:</b>	(High Speed Train) Passenger train used in Britain.
<b>Hopper car:</b>	A freight vehicle with a facility for discharging its load through the floor.
<b>Hot box:</b>	An overheated vehicle axle bearing resulting from breakdown of lubrication.
<b>Intermodal terminals (freight):</b>	Specially designed yards where truck-trailers and/or containers are loaded on and unloaded from flat cars.
<b>Journal box:</b>	The device at the end of the axle of railway rolling stock which contains the wheel bearing and its lubrication.
<b>IRC:</b>	Light, rapid, comfortable – a Canadian passenger train which will be placed in service in 1981-82.
<b>Marshalling yard:</b>	The British term for a classification yard.
<b>Piggy back:</b>	System for conveying road transport trailers on railway flat cars.
<b>RDC:</b>	Rail Diesel Car.
<b>Switching yards:</b>	Small yards used for handling, sorting and storage of traffic related to local freight service.
<b>Tank car:</b>	Freight vehicle designed to carry liquids or gases in a tank-like container.

<b>Tempo:</b>	A passenger train in Toronto-Windsor service with special cars and locomotives.
<b>T.G.V.:</b>	A French electric high speed train. (Train à Grande Vitesse)
<b>Ties:</b>	Steel, wood or precast concrete beams used to support and anchor the rails.
<b>Turbo:</b>	A fixed formation 9 car lightweight passenger train powered by gas turbines and employed in the Toronto-Montreal service.
<b>Unit train:</b>	A freight train of special purpose cars devoted to conveying a single commodity from origin to destination.
<b>Wheel loading:</b>	See axle load.









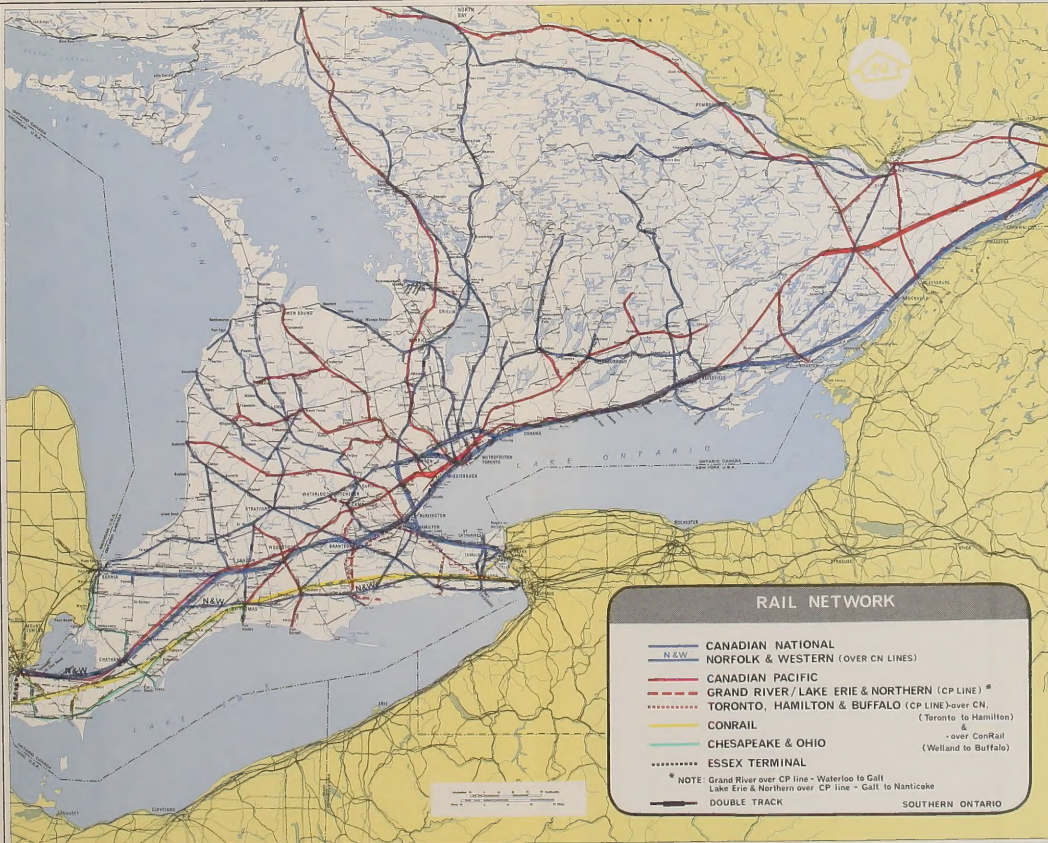
# RAIL NETWORK

- CANADIAN NATIONAL
- CANADIAN PACIFIC
- - - - - ALGOMA CENTRAL
- - - - - ONTARIO NORTHLAND
- = DOUBLE TRACK









NORTHERN ONTARIO







## RAIL NETWORK

-  **CANADIAN NATIONAL**
-  **NORFOLK & WESTERN (OVER CN LINES)**
-  **CANADIAN PACIFIC**
-  **GRAND RIVER/ LAKE ERIE & NORTHERN (CP LINE) \***
-  **TORONTO, HAMILTON & BUFFALO (CP LINE)-over CN,**  
(Toronto to Hamilton)
-  **CONRAIL**
-  **CHESAPEAKE & OHIO**  
- over ConRail (Welland to Buffalo)
-  **ESSEX TERMINAL**

\* NOTE: Grand River over CP line - Waterloo to Galt  
Lake Erie & Northern over CP line - Galt to Nanticoke

 **DOUBLE TRACK**

**SOUTHERN ONTARIO**







ONTARIO TASK FORCE  
ON PROVINCIAL RAIL POLICY

